

THE SCORE

A MUSIC MAGAZINE

Editor: William Glock

Number 25, June 1959

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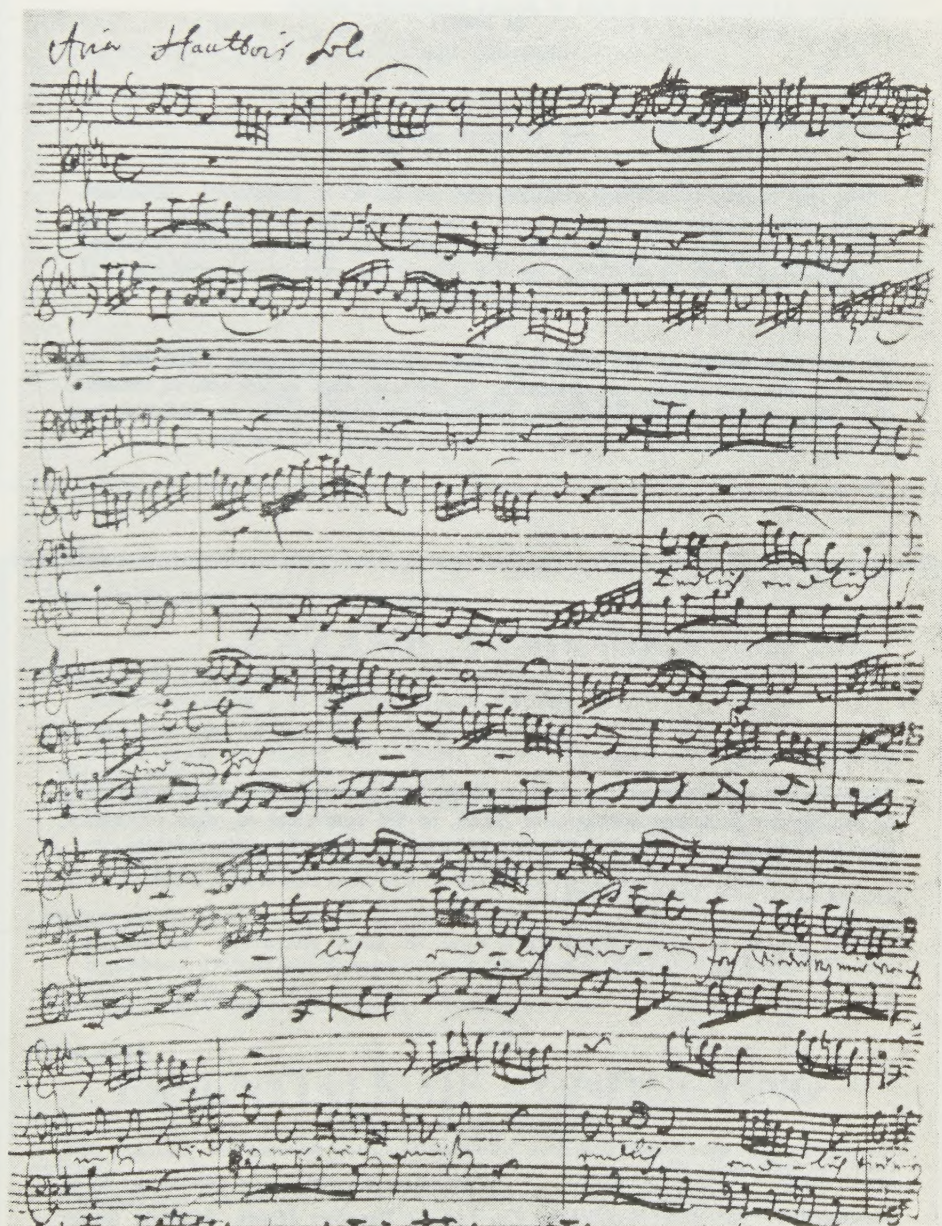
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A MUSIC MAGAZINE



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June 1959

Editor: WILLIAM GLOCK

COVER MANUSCRIPT is part of Bach's *Kreuzstab* Cantata.

We wish to apologise for the delay in bringing out the present issue, which has been due to various unavoidable circumstances. At the same time we are able to announce that, after a period of uncertainty as to its future, the magazine will be published, from the next issue onwards, by *Print and Press Services Limited*, of London.

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A MUSIC MAGAZINE

Editor: William Glock

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Notes on Arnold Schoenberg's Unfinished Oratorio 'DIE JAKOBSLEITER'

Winfried Zillig

No work by Arnold Schoenberg has been the subject of so much mystery as *Die Jakobsleiter*. Universal Edition, it is true, had printed the text of this oratorio in 1917; and there was general surprise that a man who had apparently set out only to shock and destroy should have written the text for a large-scale religious and philosophical work. In this work, the angel Gabriel shows various people—a man called by God, another who is a rebel, one who is striving, a chosen one, a monk and finally a dying man—the place they have to fill, which in each case is quite different from their hopes and aspirations. The migration of souls is portrayed in a great symphonic interlude. The souls wander, each according to his deserts, from one reincarnation to another, unable to find their way out of the never-ending circle, in spite of the help of demons, genii and angels, until, at the end of the second part, Gabriel teaches them to seek union with God in prayer. Schoenberg's text, which at one time was taken over by the Theosophists, shows us above all today his deeply humble attitude to all things divine. This expression of his unshakeable belief in the value of prayer leads to a harmonious fulfilment in the beautiful words from the Psalms which he set at the end of his life.

But although the text of *Die Jakobsleiter* was generally available, practically nothing was known about the music. During the mid-twenties, when I was studying with Schoenberg, there was a rumour that he was writing a work which traversed all his styles, and was supposed to be *Die Jakobsleiter*. But that was a mere legend, and one could only assume that in fact some details had trickled through about his other choral work, also religious: the opera *Moses and Aron*. And since Schoenberg himself was always exceedingly reticent about his own creative activity, the rumour was probably the result of combined conjecture.

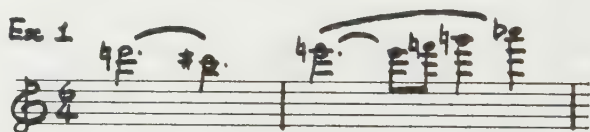
But legend persisted in later years as well. Even Stuckenschmidt, whose information came from personal contact with Schoenberg and who is a most conscientious biographical historian, maintains in his Schoenberg book of 1951 that the sketches for *Die Jakobsleiter* date from the war years 1915 to 1917, and that the composition itself had not been completed until 1945.

I now have in front of me, to the best of my knowledge, the entire material connected with the composition of *Die Jakobsleiter*. First and foremost, Schoenberg's

sketchbook which, if you compare it with the later *particell*,¹ gives an amazing insight into his method of working. This sketchbook,² is bound in linen—probably by Schoenberg himself—and is marked on the front cover 'May 1915'. The first page of music is dated 'May 4th 1915'. The sketches which follow—five pages of music and then three pages of text (pasted in)—form the first draft of a symphony for an orchestral combination in which—as in the *Songs with Orchestra*, op. 22, but on a much vaster scale—the strings are combined with a 'choral' assembly of wind instruments.

Then, after some empty pages, we find on page 20 the sketch for a piece for string quartet and harmonium. In the margin is the date: '30.1.1917'. This sketch covers seven pages. Then follows a page containing sketches of themes for an orchestral work.

On the next page (p. 28) there are two remarks: 'started beginning of June 1917, Schbg' and 'Later add chorus without text'; also a theme for an orchestral piece. This consists of a melody for solo violin in a high register, obviously the basic idea of the work, with a chordal accompaniment which reminds one of Opus 22. Before this melody is finished, the solo viola enters with a subsidiary thought, a single line at first, but eventually accompanied by the first six notes of the principal subject in *stretto*. These six notes are as follows:



The fact that Schoenberg was immensely exercised by these six notes, in a manner quite different from what one would expect in view of the development of his music from the *Second String Quartet* to the *Songs with Orchestra*, Opus 22, is already apparent at the end of the page. There we find the same notes, in a different rhythm, a totally different form, and making a completely new theme, with only the order of the notes remaining the same. This order seems in fact to mark the birth of an idea which eventually led to the development of the twelve-tone system in 1923.

Ex. 2.

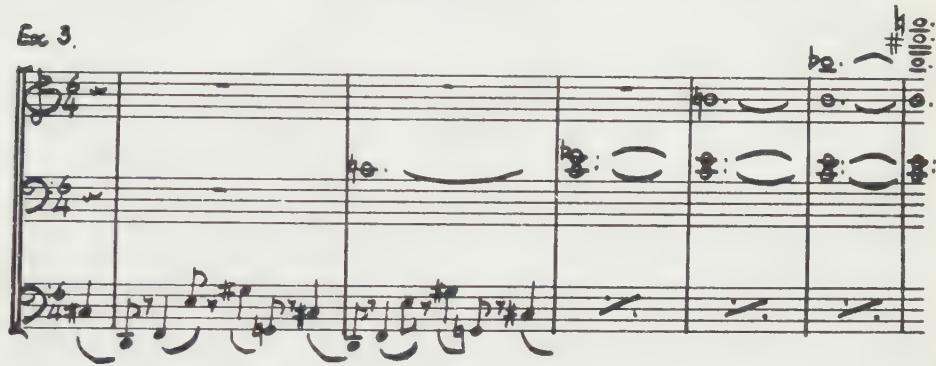


It is clear that Schoenberg had not yet thought of *Die Jakobsleiter* when he wrote down this thematic idea. The remark: 'Later chorus without text' is written with a different pencil, and was probably added subsequently. It is true that he made use of this theme in *Die Jakobsleiter*. He used in fact the first seven bars (without

¹ Particell: a method later invariably used by Schoenberg, by which orchestral works were written down in short score but essentially complete.

² Its size is 36 centimetres by 19, or 14 inches by 7½.

the chordal accompaniment given in the sketch) at the opening of the interlude, which begins at bar 604 and was intended to separate the two great parts of the oratorio. But the reason for this seems to come later. For the moment, Schoenberg could not rid himself of the urge to compose around the first six notes of this theme. And in fact the very next page of the sketchbook, page 29, reveals the actual relation of these notes to *Die Jakobsleiter*; for it begins with the first six bars of the work.



The *ostinato* figure consists of the six notes already contained in the two previous examples. But whereas there the order of the notes was identical, it is now altered. Instead of the original series one to six, the *ostinato* reveals the series 2 1 4 3 6 5. There are even more astonishing features in this example. The whole-bar notes together with the notes of the *ostinato* produce a *twelve-note series*. Moreover, if one condenses each half of the *ostinato* and of the whole-bar notes into a harmonic structure, they prove to have the same intervallic relations.



The fact that notes 4 5 6 change octaves is quite in accordance with the freedom which Schoenberg already allowed himself in Ex. 2, and which is characteristic of the melodic freedom of the twelve-note system in general. If one examines this twelve-note complex a little further, one finds that it consists of two modes of limited transposition in the manner of Messiaen, namely: C sharp, D, E, F, G, A flat, B flat, B and C, E flat, F sharp, A.

Schoenberg's sketchbook contains up to page 134 the entire sketches for *Die Jakobsleiter*.³ Until it became available for study, the only source had been Schoenberg's particell, dated 19.6.17, which consists of 39 pages, 35×35 cm., and contains the work in completed form up to bar 686. Here it breaks off. This represents about half the whole work, which comprises two parts that are separated by a large

³ The only exceptions are pages 120 to 122, on which we find sketches for a string septet dated 9.3.1918.

symphonic interlude for orchestra and four off-stage orchestras. It is in the middle of this interlude that the particell comes to an end.

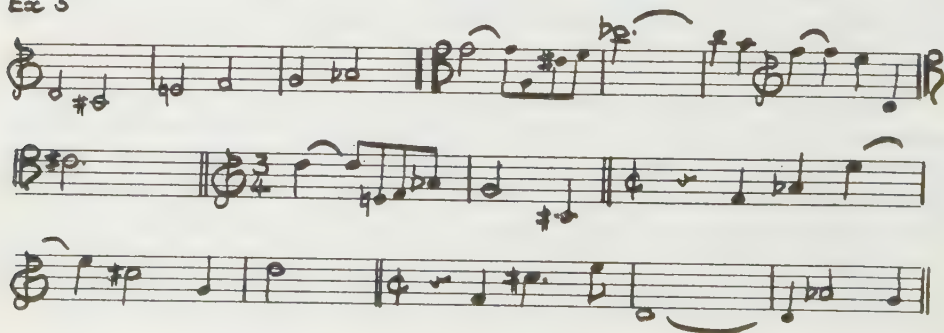
So long as the particell was the sole source of information, one could only assume that Schoenberg had set the book of his oratorio as it came, in careful detail and with all subordinate parts included (there is one place only in the particell in which Schoenberg has noted: 'Work out accompaniment'); and that he had then, for reasons which we will go into later, suddenly broken off, leaving nothing for the remainder of the work but the text.

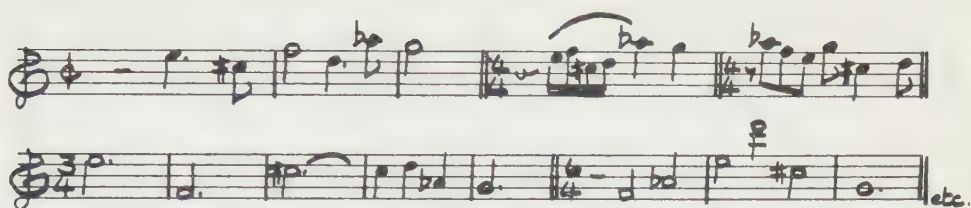
A study of the sketchbook opens up quite new and highly interesting perspectives, for it contains—though not always in the correct order—almost the entire particell, namely bars 1 to 6 and then bars 22 to 702. It continues in fact for sixteen bars beyond the particell. Yet certain passages of the particell have been sketched more than once and, judging by the order in which they appear, there must have been considerable lapses of time between the making of each sketch. Generally the first sketch represents the original idea, nearly always as a single-line vocal part, or at most with a suggestion of orchestral or choral accompaniment. This bears out the principle so often stated by Schoenberg, that in a vocal work the voice must always be the principal part. On its second appearance, the same part is worked out in a far more differentiated form from which the particell obviously emerged.

There is hardly any similarity between the actual notes of the original vocal part and those in the particell itself, but there is nearly always an affinity of line and rhythm, though the notations for the latter are often different. Small changes in the notes, and thus in the intervals, are chiefly prompted by the newly conceived accompaniment. There is often a certain difficulty in adapting these changes to the vocal line, so as to avoid, for instance, octave doubling; though such avoidance is by no means rigidly adhered to in *Die Jakobsleiter*.

On the other hand, whole pages of the sketchbook are filled with attempts to construct more and more thematic shapes with the six notes of the principal idea. The six notes are juggled together as they might be in some game or puzzle. But since they are never transposed, it is easy to recognize their origin in the principal idea. Here are a few examples:

Ex 5





In fact, many quite different types of themes in *Die Jakobsleiter*, which have no rhythmic or thematic connexion with one another, begin with the six notes of the principal idea. This proves that as early as 1917, the 'freely atonal' Schoenberg was already in search of new principles of organization.

In addition, the sketchbook contains a number of pages on which, obviously looking far ahead, he roughed out the music to striking excerpts from the second part of the text. These are no longer put down in particell form. There are even various rudimentary sketches of the final chorus. Yet Schoenberg was clearly disturbed by the fact that the thematic idea of this final chorus bore no relation to the principal idea. The version noted on page 45 of the sketchbook is a two-part canon at the fifth below. On page 112 another version is noted, but with a *comes* added, which is similarly canonic at the octave, with the entries of the two parts more widely spaced. The *comes* is constructed from the principal idea with the notes at their original pitch.

Ex 6

Herr... gott im Him... mel, her un... ser Fle... hen

Herrgott

Herrgott

Herr-gott im

Herr... gott im Him... mel her un... ser Flehen

The sketchbook also contains musical sketches for excerpts from the incomplete second part. Their sequence is as follows:

Textbook Page 19. *Rationalists*: 'Is this not named "an idea"?'

„ „ 17. *A Voice*: 'Joyful presentiment of purifying pain!'

„ „ 20. *A God*: 'Look around you. You are equally close to all.'

„ „ 22. *One who is self-sacrificing*: 'Do not rob me, oh my genius, of pleasure.'

„ „ 16. *Gabriel*: 'But what if yearning seizes you?'

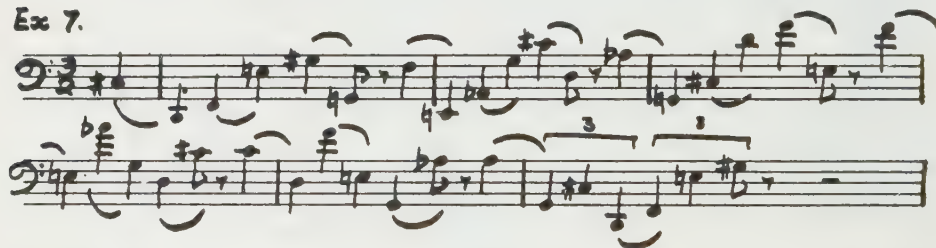
- Textbook Page 22. *A helpless one*: 'Unable to turn aside, to defend oneself, to endure.'
- „ „ 17. *A Voice*: (as above, with accompaniment.)
- „ „ 25. *The God*: 'You, chosen one, you turn away from these.'
- „ „ 26. *Gabriel*: 'He who felt pity for them.'
- „ „ 26. *Gabriel*: 'Always there was God.'
- „ „ 19. *Rationalists*: (as above, with accompaniment.)
- „ „ 20. *The unclean*: 'Formerly mortals, now become angels.'
- „ „ 25. *Lost ones*: 'Demanding advantages.'
- „ „ 25. *Lost ones*: (as above, with accompaniment.)

This list alone shows clearly that Schoenberg had a picture of the whole work in his mind, and it is not here that we can find the reason why the work remained only a torso.

The sketchbook contains, in addition to the musical sketches, detailed instructions (which have been pasted in) about instrumentation, distribution of the chorus and treatment of the off-stage orchestras. There is even a rehearsal schedule for *Die Jakobsleiter* worked out in minutest detail. Incidentally, there also exist two loose eaves dealing with the off-stage orchestras, one dated 1926, the other 1944.

Belonging to the same year (October 21st) are six pages of *particell*. Bar 7 is dated December 3rd, 1944. These six pages contain bars 1 to 44 and are obviously the beginning of an attempt to revise and complete the whole work. One can see from the first *ostinato* how thorough Schoenberg intended the revision to be. Evidently he found this *ostinato* too primitive, for he changed it into a rising and falling line, by way of variation—though still using only the six notes of the principal idea.

Ex 7.



But after this the alterations are confined to the correction of a few notes, generally to avoid octave doublings; and to notation for 'speaking voice'. In his later works Schoenberg did not use a five-line staff for this purpose, but just a single line with two auxiliary leger lines. In so doing, he forsook the principles clearly underlying the treatment of the 'speaking voice' in *Die Jakobsleiter*. But this we shall have to deal with later. After the first page of the *particell*, dated 1944, no more notes are changed. And it is clear that Schoenberg soon decided on a simpler method of revision. For there exist, beginning at bar 58, greatly enlarged photostats of the *particell* of 1917 on which Schoenberg has noted corrections, simplifications of instrumental problems, instructions for instrumentation and other small amendments, sometimes in the sketchbook proper, sometimes on extra leaves pasted in. These alterations are found up to bar 104. The enlarged copies of the remainder of the

particell contain no alterations or notes, so one must assume that they were made in preparation for work which was never done.

What conclusions can one draw from these sources as to Schoenberg's work on *Die Jakobsleiter*?

To begin with, it is clear beyond any doubt that page 28 of the sketchbook, which contains the principal idea of *Die Jakobsleiter*, or at any rate what became the principal idea, was written in June 1917, as Schoenberg himself states. When Stuckenschmidt says that Schoenberg worked on *Die Jakobsleiter* from 1915 to 1917, it is possible that he misunderstood Schoenberg, who was probably referring to his work on *text and music*. Alternatively, Schoenberg himself may have made a mistake during some conversation or other. It is clear that while still working at the sketchbook he was filling in the particell as soon as the relevant sketches were ready, for the particell begins with the date 19th June 1917. In fact it is probable that bars 7 to 21, which are missing in the sketches, were written straight into the particell. The next date noted in the sketchbook, 19.9.17, proves that indeed the work as a whole was born in a veritable fury of inspiration, for this date marks bar 603, the end of the first part, after the words of Gabriel: 'Then your inward being is extinguished . . .' After the date he writes: 'called up for military service!!' ('Zum Militär!!')

How ironical that Schoenberg was called up just at the moment when he had written a text foretelling, though of course in another sense, exactly what awaited him as a soldier of the first World War!

Here, undoubtedly, is the reason why the work remained a torso. The rush of inspiration was forcibly interrupted. Schoenberg always had to write the whole of every major work immediately in bold outline, since the development of his style progressed so rapidly that each work found him at a new stage and with a style which more often than not practically excluded all previous styles.

On the same page of the sketchbook there is yet another date, 30.11.1917, when we find Schoenberg trying to recover the flow of inspiration in three bars of an attempt to lead in from bar 603 to the interlude. But the attempt in this form was rejected. On the next page we read: 'demobilized 7.12.1917.' Once released from the army, he immediately set to work on *Die Jakobsleiter*. But, whereas before the period of his call-up he had written the whole of the particell in continuous form and made hardly any individual sketches,⁴ there now follow nine pages of them, covering the whole of the second part of *Die Jakobsleiter* as he envisaged it. Proof that his work at this stage was progressing haltingly, is given by the date on page 103: 4.1.1918. It is not until page 106 of the sketchbook that the particell is continued at bar 604. Then, on page 117, we find two versions of the final chorus, dated June 1921 and 18th April, 1922. Meanwhile Schoenberg seems to have given up work on the interlude until the summer of 1922. The continuation (at bar 640) appears on page 123 of the sketchbook, and on the following page there is a minute marginal entry: July 1922. After this, yet another interruption until eventually the source dries up completely.

⁴ He wrote the first part of the huge work in about three months.

We know that in the same summer of 1922 Schoenberg first intimated to his pupil and assistant, Josef Rufer, that he had discovered a new method of composing with twelve notes related only to each other. We also know that the year 1923 saw the completion of the *Piano Pieces* Opus 23 and the *Serenade*, both of them works in which the principle of composing with twelve notes is so far anticipated that in the *Serenade* we find a set of strictly serial variations and, in fact, the very first true twelve-note composition, namely the *Sonnet*. It seems that, from the time that he was demobilized, Schoenberg became so engrossed in the new discoveries which led to serial composition that he worked only in a desultory fashion on *Die Jakobsleiter*. Indeed, the final discovery of the twelve-note system made further work on *Die Jakobsleiter* impossible. From now on, Schoenberg had to express himself in terms of the newly-found possibilities; the swift sequence of twelve-note compositions proves this beyond a doubt, as does the fact that in each successive work the new system takes a great stride forward. And although *Die Jakobsleiter* contains many premonitions of the twelve-note method, his search for it in this particular work invariably led him into other paths which from now on were closed to him.

If one compares the musical content of *Die Jakobsleiter* with that of the rest of Schoenberg's work, one is astonished, after the uncompromising boldness of the atonal period, to find much that is reminiscent of the *Chamber Symphony* or of even earlier pieces. The melodic style is far simpler than in the preceding works: he seems suddenly to prefer a sustained melodic line to the earlier increasing melodic disintegration. At times there are even traces of tonality, as when Schoenberg deliberately leaves out certain notes and gleans a pure D flat major line from an otherwise complex melodic structure. His use of harmony, too, often looks back to simpler formations than he used for instance in the *Five Orchestral Pieces* or *Die glückliche Hand*. Repeatedly one finds long rows of augmented triads. As a result of the ever-recurring six notes of the principal idea, there are repetitions which at times are reminiscent of classical symmetry. Contrapuntal forms, such as had appeared in *Pierrot Lunaire* through a distorting mirror as it were, are here developed strictly and in the old manner. The 'speaking voice', which in *Pierrot* had been used in such a fascinating and masterly way, is now turned to entirely different uses, especially in the writing for the chorus. In *Pierrot* Schoenberg gives express instructions that the speaking voice should follow the notated intervals relatively; that is to say, according to its vocal range. But in *Die Jakobsleiter* the orchestra is consistently co-ordinated in pitch with the spoken choruses, both melodically and harmonically, so that one is forced to conclude that here the speaking voice has to keep to the notated pitch level and therefore to be much nearer to singing. This interpretation of the spoken melodies in *Die Jakobsleiter* is justified also by the fact that it enhances the religious, oratorio-like character of the work.

Now, why did Schoenberg's musical idiom become so much simpler in *Die Jakobsleiter* than it had been in his atonal period? Very probably the religious subject with its monumental breadth and great idea was one of the reasons. But probably an even more decisive circumstance was the fact that, after starting work on *Die Jakobsleiter*, Schoenberg was searching for a new system, having tried systematic-

ally during his atonal period to avoid one. Today we can see that he was deceiving himself. For when a genius consciously refuses to establish order, intuition steps in and provides it. It is above all in the works of Schoenberg's atonal period that one can detect a system which seems at first to result only from an avoidance of any repetition, but which for this very reason has specific melodic and harmonic shapes forced upon it. These lead inevitably to the twelve-note system.

The search for a new system caused Schoenberg in *Die Jakobsleiter* to shift his complexities from the melodic and harmonic fields to the structural. And in all likelihood, it was this return to a greater simplicity which fostered the legend that *Die Jakobsleiter* contained all Schoenberg's musical styles.

In 1922, while in the throes of discovering the twelve-note system, Schoenberg was naturally unable to finish a work written in a style that he had left behind. But in 1944, as his completion of the second *Chamber Symphony* proves, he could well have done so. He then possessed the wisdom and resignation to enable him to re-adopt an earlier style. How tragic then that illness, as well as his occupation with less gigantic works, prevented him from finishing *Die Jakobsleiter*.

Incidentally, notes on the instrumentation show how Schoenberg changed his conception of the general sound of the work. When he started on *Die Jakobsleiter*, it was his conviction that the 'string chorus' must be balanced by a 'chorus' of wind instruments. The leaves which were pasted in as early as page 30 of the sketchbook—probably dating from June 1917—contain the following huge-scale instrumentation: 20 flutes (10 of them piccolos), 20 oboes (10 of them cors anglais), 24 clarinets (6 of them in E flat, 12 in B flat and 6 bass clarinets), 20 bassoons (10 of them double bassoons), 12 horns, 10 trumpets (2 of them bass trumpets), 8 trombones (2 of them alto trombones, 2 bass trombones), 4-6 contrabass tubas (contrabass trombones, helikon, bombardon), 8 harps, celesta, percussion, 50 violins, 30 violas, 30 cellos, 30 double basses. Further, 13 soloists, and a twelve-part double chorus of 720 singers on the stage, as well as choruses placed both high and low off-stage, and 4 off-stage orchestras. But already in June 1921 we find a new list of instruments pasted in, in which these huge numbers have shrunk by half. Also a rehearsal schedule which seems to indicate that an actual performance had been planned. A type-written note headed 'Instrumentation for *Die Jakobsleiter*' shows a normal large-sized orchestra with quadruple woodwind, 4 horns, 3 trumpets, 3 trombones, a tuba, kettledrums, percussion and strings. This obviously dates from the year 1944 like the photostats of the new version of the work. The only unusual feature is a tenor horn (baryton). Harps and celesta are absent. Finally, the instrumentation of the 1917 partcell found on greatly enlarged pages which Schoenberg probably added in 1944, allows only for a normal orchestra with triple woodwind.

We shall never know whether this progressive simplification was the result of the changing taste of the times, or whether it was simply that orchestration on this scale would have meant a complete revision of the partcell, involving an untold number of subordinate parts such as we find in long sections of the *Gurrelieder*. An even more likely explanation is that the clear and often quite simple musical structure of *Die Jakobsleiter* precluded such a complex orchestral texture by its very nature.

There remains one very interesting feature, which shows that Schoenberg was prepared to make use of the boldest technical possibilities of his time. He expended much thought on the acoustical problems of the off-stage orchestras. In a marginal note about them, written in March 1926, he weighs up all the possibilities of their relationship to one another. He even makes an attempt to design on paper an apparatus which would enable the sound from the different orchestras to be directed by means of a system of ducts to different parts of the concert hall. He tries to compensate for the time-lag incurred by the journeying of the sound from behind the stage to the various parts of the hall, by a complicated rhythmical system of anticipating the beat. He comments on this again in a note written in English in 1944:

Today October 1944, the
problem of the "Feri" orchestras
and "Feri"-Choir would best be
resolved by being played behind
the scene, by soundproof materials
mandible at the stage, but by
microphones distributed or as
to appear at different places of
the hall.

Schoenberg is prepared, then, to substitute a simple modern microphone for the complicated acoustical system conceived in 1926.

But Schoenberg's aural imagination goes to even further lengths. A note written in 1921 on the ending of *Die Jakobsleiter*, shows how he was taken with the idea of sound-complexes emerging from different places and uniting only in the hall, that is to say, in the ear of the listener. The note reads: 'Chorus and soloists, at first chiefly on the platform, then gradually joined by the choruses stationed with the off-stage orchestras, so that in the end music is streaming from all sides of the hall.' Is this not like a prophecy of electronic music and of the most recent experiments in spatio-acoustics, which are considered by the musical youth of today to be the *dernier cri*?

But that too is in keeping with the unique wholeness of Schoenberg's personality. The motto for his life and work could well be the first words spoken by Gabriel in *Die Jakobsleiter*:

'Whether right or left,
Forwards or backwards,
Uphill or downhill,
We have to go on without asking
What lies behind or ahead.
It will remain hidden from you.
You should, you must, forget it
To fulfil your task.'

SINGING : THE PHYSICAL NATURE OF THE VOCAL ORGAN

The above title is that of a book by Frederick Husler and Yvonne Rodd-Marling which is shortly to appear in German, and from which an excerpt is printed on pp. 18-25. Readers may, however, be interested in the following introduction by Mrs. Rodd-Marling:

Professor Frederick Husler has been training singers from all over the world for nearly forty years. At the age of eighteen he decided to take up singing as his profession. True he had 'no voice', but he believed even then that the ability to sing is something which is given to the human race as a whole, and if this were so, it should be possible to 'find' his own.

He started with one great advantage: coming from a family distinguished in various fields of medicine, it was natural to him to combine his creative and artistic abilities with the discipline of a scientific upbringing—where everything is valueless unless proved. In the search for his own voice, he had to work at that period mostly by instinct, but at the same time he studied the anatomy and physiology of the vocal organ to find the answers to a number of puzzling questions. For instance: What is the actual difference between the great natural singer and the ordinary human being who can sing just a little or perhaps not at all? We are told that anatomically there is no difference; so the 'born' singer is not, so to speak, a freak of nature. Yet he can sing without 'learning' how to do so. His voice has all the hall-marks of 'culture', of perfect vocal 'technique', so that his training consists mainly of learning music, words, interpretation, acting and so on.

Eventually Professor Husler came to the conclusion that although objective science has answered probably all the anatomical questions and most of the physiological ones, nevertheless something must have been overlooked. Could the basic error lie in the fact that speaking and singing are generally regarded as being identical processes involving exactly the same component parts; or is there some significant difference which might give the clue to the whole puzzling business, if approached from another angle? Is there a specific instrument of singing and if so of what does it consist? Further, what are the exact causes of those aesthetic sensations which the ear is able to perceive but for which science has found no satisfactory explanation?

Singers and singing teachers have always had to work mostly by ear and by instinct, and if both these faculties are well-developed they are likely to be successful. Certain traditions have been passed down to them through the centuries: for instance, how the voice should be 'placed' and 'supported'; and a special kind of language has come into existence so that teachers can make themselves clear to their pupils by way of the imagination. They say, for example, that the voice must be 'placed high' or 'forward', etc., and these fictions are indeed extremely useful for they stimulate certain centres of the brain and the vocal organ reacts to the stimulus as best it can. Time has proved such traditional methods to be of great value, always providing the teacher is gifted with an acute sense of hearing and has an unspoiled instinct for the workings of the vocal organ. But they are not infallible, especially in problematical cases.

It seemed that what was missing, from the teacher's point of view, was a way of linking up the findings of objective science with what one might call the 'knowledge'

imparted by the ear. The question was, of course, whether science, which has to rely on the evidence of things *seen*, could be brought into an honest partnership with the subconscious 'knowledge' derived from things *heard* and, therefore, difficult to prove. Yet, if the two could be combined, they might solve most of the problems and also provide the accurate and practical basis for the training of singing voices which our profession so badly needs.

Together with the never-ending practical work of training singers, it has taken the authors nine years of research—collecting, sifting and checking the scientific evidence available from every possible source. Many fascinating things have come to light; for instance, that almost all the traditional 'fictions' employed by singers and teachers have sound physiological reasons. Also, that 'every muscle in the extensive organ of singing, the manner in which each of them acts, gives to the voice a particular, identifiable sound'; so that if the teacher's ear is trained to hear tonal qualities accurately enough, and his knowledge of the physiological laws governing the vocal organ is thorough enough, it is possible for him to diagnose, from the sounds produced by his pupil, more or less exactly what is happening. He can then judge what his next step should be, in order to produce the results which his ear tells him are still required.

It means that the voice trainer must continuously translate the singer's impressions and conceptions into the exact knowledge contributed by science, associate the tonal qualities in the voice with what goes on in an anatomical and physiological sense, and in fact transpose from one level of consciousness and one form of perception to the other and back again. It is different of course for the singer. To burden him with a lot of scientific conclusions is not only useless but confusing.

The book deals almost exclusively with the *nature* of the singing voice and only incidentally with the 'Art of Singing', because what an eminent physiologist has written about the playing of stringed instruments applies with equal force to singing: 'In playing the violin, mind and spirit can speak only through the medium of bodily movements, so that the artist's means of expression cannot be made to surpass the limitations imposed by his physical capabilities'.¹

Although some of the conclusions arrived at by the authors must necessarily remain hypothetical until science finds a method of proving or disproving them, in practice they appear to be eminently workable, which is after all the main thing.

[The following excerpt, under the title *Basic Principles*, constitutes the first chapter of the book.]

1.

The singing voice is evoked by a particular psychological disposition and a long and complex series of physical functions.

The necessary psychological disposition is common to all mankind, for the urge to sing is inborn, even though, as a rule, it can only be satisfied indirectly (as in the making of music or of verse, etc.). It is one of the attributes of man and for its fulfilment requires no extraneous aids or adaptations. In highly civilized races this inner urge is slowly fading; it is utterly irreplaceable as regards the organ of singing and from other aspects too this gradual weakening of a vital impulse gives rise to

¹ W. Trendelenburg, *Die natürlichen Grundlagen der Kunst des Streichinstrumentenspiels*, Berlin, 1925.

consequences that are worth considering. . . . However, these particular problems do not come within the scope of this present chapter.

Similarly, the *physical* pre-requisites for singing, the *anatomical* constituents, are not chance endowments limited to a few individuals. Every human being normally possesses by nature the physical means for singing—even if he ‘has no voice’ or, to be accurate, even if he cannot sing. In the normal person, inability to sing is due either to an impairment of the vocal organ or, more usually, to the natural inborn faculty being hampered and obstructed; it needs to be released, to be, so to speak, ‘unlocked’. It is not because the organ of song is missing that a person cannot sing, but because the poor condition of the organ prevents him from doing so. This simple fact may seem too obvious to be mentioned, but it is apparently not generally known even to many physiologists and laryngologists. And the reason is that most people believe, whether consciously or not, that the singer possesses a special physical equipment and also that in some miraculous way he himself fashions his own instrument. This, however, is to place singers outside the laws of nature, because so complex and significant a faculty as singing must necessarily be given to a whole species (no raven for instance can sing, whereas every cock nightingale can unless disease prevents him).

The ability to sing belongs to the species Man; he is made that way. At one time mankind sang quite universally, but endless aeons have passed since then (for instance we know that *Phonaskos* had long been necessary to the earliest of ancient Greeks, and that even Orpheus had his teacher, Linos); so we can assume that the entire human race suffers from varying degrees of *phonasthenia* (vocal weakness, chronic collapse of the mechanism) as a result of the general and persistent disuse of the instrument of singing. It has become the normal condition, and here the great natural singer in whose vocal organism the faculty is still active and undamaged, may rightly be considered a fortunate relic from a bygone human epoch. The vast majority of human beings today—the normal ‘voiceless’ individuals—are simply *inhibited* singers.

2.

This concept (that man is naturally a singer, though normally more or less inhibited) is of vital importance to the voice-trainer. It will point out the course he must pursue down to the smallest details and also clear away many ancient but still powerful fallacies (for instance that phonation in singing and speaking is one and the same). Therefore forming and training a voice is a process of re-generation; of restoring the singing organism to the condition intended by nature; of strengthening and revitalizing it in all its many parts. Voice-training as such—leaving aside all artistic considerations—is more a therapy than anything else.

In all probability, man was gifted primevally with a singing voice (it had as yet no connexion with even the simplest form of music), which he possessed long before he was able to speak. This particular evolutionary process can be observed in babies. Unconsciously at first they utter melodious, affective sounds and then with awakening intelligence must learn slowly and laboriously to refashion their voices for speaking. There can be little doubt that the organism of the throat is planned and constructed,

together with its other functions, as a specific instrument for singing; the vocal folds are formed and attuned according to the laws of harmonic vibration which can serve no other purpose than to produce 'useless' aesthetic sensations. No such complicated mechanism is necessary for speech. If we may so express it: the mind that formed speech took possession of the organism of singing—and it may well be that here began the first repressive inroads into its extraordinarily sensitive substance. The science of phonetics tells us that speech is not tone but modified noise,² and that its intention is governed more by the visual than by the auditory sphere. This means that speech necessarily remains a foreign adjunct to the sphere of singing.

In many ways man developed his most human attributes with the invention of language, and speech grew into so vast a superimposition that it has resulted in a chronic lack of *innervation*, a lack that definitely affects the pure singing function of the vocal organ. And neither the will, nor an exact knowledge of the processes involved, nor the impulse to sing that still exists in every individual, is able normally to set this indwelling mechanism in motion to its full extent.

The result of such long and general disuse has been to cause a weakening, even an atrophy (through inactivity) of the musculatures and a parallel fading of what is known as 'organic memory'.

Moreover new disturbances arise for each individual from the very start of his upbringing: the respiratory muscles used in the audible expression of emotion, such as ringing laughter, shouting, sobbing, crying, moaning, etc., invariably cause a co-ordinate movement of the throat. But from earliest infancy these particular muscle-systems are checked and repressed, almost put right out of action by the conventional rules of behaviour which discountenance all noisy expression of emotion. The muscles of the larynx that are dependent on the organ of breathing are equally incapacitated and this circumstance alone often leads to total self-oblivion (loss of organic memory), chronic inhibition and final atony of the laryngeal and respiratory muscles used in *singing*.

Finally, another major cause of defection lies in the increasing dominance, in modern man, of the eye over the ear. In the normal person the sense of hearing has given way to his sight and its intelligence, an intelligence of a fundamentally different nature. The ear is no longer capable of finding the organ of singing quite by itself so that our first major task is to reawaken the sense of hearing until it is able to hear physiological processes as they occur in the throat and organ of breathing. It is the starting point of all work on the singing voice.

3.

How the voice trainer should proceed can be deduced from the foregoing, as follows: Nothing extraneous can be added to the organ of song. Every quality needed in singing already exists within it—but it is only the proper functioning of the organ itself that can release them. All we can do is to stimulate it into helping itself—just as in the medical treatment of certain diseases today some form of reaction is

² E. R. Jaenach, *Untersuchung über Grundfragen der Akustik und Tonpsychologie*.

produced which causes the body to heal itself. Physically speaking, man possesses no self-creative capacity, for the same rules apply to him as to all organic matter. (The gardener can draw no more out of a plant than is latently present within it, and no trainer can force an animal to do things for which it has no natural aptitude.)³ A voice-trainer who works according to laws of his own fabrication will end by substituting a sickly instrument in place of the natural mechanism pre-planned with such incredible logic—a disaster which happens all too often.

We have said that the human vocal organ is constituted by nature as an instrument of song and that all the specific qualities of singing are latent within it. This is equally true of the normal 'voiceless' individual. We must get used to the idea that normally unmelodious, ugly or insignificant voices are accurate reflexions in sound of the devitalized, distorted or unawakened condition of the organ producing them. It is not as if the throats of all great singers precisely resembled each other. Outwardly there is little difference between such 'divine' organs and those belonging to normal 'voiceless' people.⁴ The same types of larynx are found in both categories. And it is highly instructive that a great singer can always imitate the poor tones of a non-singer—either by omitting to use certain parts of his vocal organ, or by disturbing its proper physiological functioning during phonation. An ugly voice is, so to speak, merely the tonal equivalent of certain omissions. The great singer has free access to his vocal organ and that is all; it is awake, it is 'unlocked', and this alone is enough to make his voice such that we consider it beautiful. Therefore the therapy used in voice training is, essentially, an '*unlocking*' process (a treatment that applies equally to the cantatory sphere of hearing).

Let us try to express it more clearly: Hidden in the vocal organism is a fund of singing experience so vast that it is scarcely possible for one single individual to draw upon it to the full—a problem facing all really great singers. If the organism is innervated (that is, revitalized in all its many parts), if its muscular substance acquires the maximum in rapid, elastic, tensile power, and if the diverse superimpositions are eliminated, then this fund is made accessible and the myriad qualities hidden in it at once become apparent. Even the aptitude for so-called 'technical skill' (*coloratura*, *fioritura*, trills, etc.) belongs inherently to the musculatures of the larynx, which, like all other muscle-systems, is rhythmically constituted and needs only proper training to be aroused.

4.

Badly innervated muscles and muscle-groups suffer from motor-weakness and inflexibility. Possibly also the reverse: a muscular organ that has been rendered immobile from lack of exercise will always be a poorly innervated one.

³ '*Levade, Pesade, Courbette*, etc., are natural though highly developed movements of the horse': Spanish Riding School.

⁴ On the death of Francesco Tamagno, the world-famous tenor and 'vocal wonder', a commission of doctors and scientists performed an autopsy on his larynx. To their astonishment and disappointment, all they were able to report is contained in the following sentence: 'The organ differs from that of a normal person only in that it exhibits an unusually large number of scars on the wall of the pharynx, caused by catarrh.' (*Musik u. Theater Archiv*. Gottfr. Hagen, Munich, 1917.)

Now if such badly innervated and inflexible organs are called into action, it is only with difficulty that they can carry out the work expected of them; and they will try to help themselves by using extraneous forces (in the case of a singer, not only by using forces of a muscular nature but also by increasing the pressure of breath). The resulting struggle is usually described as hypertension. It might possibly be compared with the following remote example: If, by artificial means, one were to cause a partial paralysis of the under-arm muscle used in grasping (this happens in certain neural disorders), and then try to grip, other adjacent muscles would try to serve as substitutes. A stronger effort of will might bring distant and quite independent muscle-groups into play—for instance the masticators, the ‘teeth clenching’ of extreme exertion. Furthermore, such forced endeavour would automatically cause the breathing apparatus to exert an inordinate pressure of air against the throat . . . The above example of the paralyzed under-arm muscle represents an abnormal condition; yet this form of spasmodic tension is precisely what occurs when a poorly innervated and ‘locked-up’ vocal organ attempts to intone.

Powerful but sluggish musculatures, with the will interfering to demand more than they can achieve, only aggravate the spasmodic tension. This is the reason why moderately aesthenic types can sometimes accomplish more than athletic ones. The true vitality of a musculature does *not lie in the bulk of its strength, but in its mobility*.

Muscular forces lacking perfect motor-response are useless. They must be agile, flexible and quick to react, with the impulses that govern them so strong that they can tense and relax at lightning speed. Such muscle-systems are healthy. Extraneous aids would only hamper them.

The turn of the last century saw the ending of a phase during which most natural tendencies had been consciously and systematically held in check. Pseudo-natural science was all the fashion and the development of physical, mental and spiritual ‘efficiency’ was considered of paramount importance. It was the era of ‘strict deportment’, both moral and physical; the feminine form was rigidly encased, instrumentalists practised with arms immobilized by albums wedged beneath them, and singers sang with throat and breathing organ deliberately fixed. These methods having reached the height of absurdity, it was suddenly realized that civilized man as a whole was suffering from hypertension and the logical reaction was embodied in the magic formula ‘Relax’. And everyone proceeded to relax: gymnasts, dancers, musicians, etc.; singers too went through an elaborate and systematic process of loosening-up . . . Yet no-one to this day, at least not in schools of singing, has ever seriously enquired into the causes of such hypertension. It was generally considered ‘bad habit’.

Yet bad habits are mostly bred by necessity; certainly so in singers. Apart from conditions of spastic inco-ordination due to anatomic malformation, or other pathological conditions, no-one normally stiffens tongue, soft palate, ventricular bands, breathing apparatus and so on while singing, if the competent musculatures for doing so are fully sensitized and active. Illegitimate aids of any sort would be superfluous. It is utterly unphysiological to try to eradicate ‘bad habits’ by inculcat-

ing better ones, as for example by maintaining a constant state of so-called 'Relaxation'. Proper relaxation can be no more than a self-evident pre-requisite.

Let us re-emphasize the main points: If it is true that man is naturally constituted as a singer (though normally more or less inhibited), then by thoroughly revitalizing his vocal organ in its entirety he should once more become a singer. And so it is in fact. Just as a voice can be 'lost', so can it ultimately be 'found' again. One has to see the *normal* person's singing organ as either a disintegrated mechanism or one that is hampered by its own impotence. Only a small percentage are utterly hopeless cases and these, we may suppose, are victims of man's domestication. 'Vocal marvels' as such do not exist; there are only marvels of good condition, of being marvellously 'unlocked'. This does not mean, of course, that all those who like to sing should be turned into professional singers. Quite the reverse: the most stringent care must be taken in selecting; according to physical and psychological qualifications, to musicianship, character and mental capacity, etc.

The principles described above as the basis for all voice-training may perhaps not pass unchallenged. It would therefore be as well now to deal briefly with some of the propositions most apt to be queried. To do so we shall have to differentiate more accurately than is usual between some of the prevailing terms.

Vocal research maintains that 'no *specific* vocal organ exists'.⁵ This may seem strange to the uninitiated, but it is nevertheless easy to understand.

Breathing organ, larynx and the network of muscles in which the larynx is suspended—these parts out of a large and complex whole—are constantly serving innumerable purposes. That is to say, they connect up into quite different mechanisms according to the purpose required. For instance, in such *physical* processes as breathing, swallowing, coughing, yawning, sneezing and the like. The *intellect* fashions a special mechanism for speech, while others are formed for *affective* expressions such as laughing, crying, screaming, sobbing, etc. For *singing* a completely different mechanism comes into existence into which, however, other mechanisms or parts of them are built. The impulses governing these various processes create in each case a special instrument no part of which possesses a static shape; it is the temporary erection of many parts that turns them into predetermined functional structures. Not only do we agree with the verdict of science that no organ exists solely for the production of the voice, but it seems to us of the greatest importance that the voice-trainer should fully understand this fact, for many of the complications he has to deal with are caused by it.

Science also tells us: 'The organs instrumental in producing voice . . . possessed from the beginning an extra-phonetical physiology'. 'Phonation is a secondary functional adaptation that was more or less suddenly thrust upon an organ that had not been designed for it.'⁶

That *speech* was once an enforced functional adaptation, is of course a familiar conception. But the statement that the larynx itself was not designed from the

⁵ Panconcelli-Calzia, *Die Stimmatmung*.

⁶ Panconcelli-Calzia, *Die Stimmatmung*.

beginning for the production of voice, is so accurate as to be meaningless—inasmuch as this ‘beginning’ lies far back endless aeons ago when there was as yet no trace of Man on earth. We are concerned with him as he is *now*, stabilized at the point he has now reached. The fact that a voice-giving mechanism can unthinkingly be erected by an indwelling disposition, can only mean that it is just as innate as the mechanisms serving the processes described above and that are also fashioned out of an extremely mobile and modifiable mass of organs and musculatures. What else can explain the emergence, though rare, of the so-called ‘natural singer’ who sings perfectly from the beginning, and has never had to ‘learn’? No-one will surely believe that his astounding vocal accomplishments are solely due to chance. In singing there is a physiological Right and a physiological Wrong; but if singing were not one of Nature’s designs, how could this be possible?

By releasing a particular rhythm of movement throughout the vocal organ, it can happen (in would-be singers with little voice but exceptionally good reactions) that its many separate parts amalgamate almost immediately, as it were of their own accord. They glide, so to speak, into the predetermined functional form and quite automatically the Beautiful Voice appears. Anyone witnessing this phenomenon or experiencing it themselves will certainly be converted to our way of thinking.

The following statement could also be misinterpreted: ‘Man can make noise with his larynx; he speaks and he sings with his brain’.⁷

(1) Speech is a creation of the intellect. According to science ‘Thinking and Speaking are identical’; they are one. But this unification was initiated by the power of the mind, not by the vocal organ and its psychic subjection. The intellect makes use of the vocal organ—which ‘had not been designed’ for such a service. Thus thought is the primary and most essential part of speech, and this is why speaking is so peculiarly brain-directed. It is a unique form of specialization, superseding nature, and one to which no other vocal process can be compared. Therefore the spoken tone for purposes of research on the *singing* voice is absolutely useless. (Yet there are phoneticists who think solely in terms of the speaking voice, or rather who associate it with all other phonatory possibilities. They orientate themselves by it, form their judgments from it and this in turn brings them back to their original point of departure: Research on the spoken tone.)

(2) Singing, on the other hand, is always at *first* an emotional outflow, which is, again at *first*, seriously disturbed by mental controls—as all intellectually brilliant singers are aware. Indeed it can safely be said: The tonal quality that belongs specifically to singing can never be produced if the emotional impulse is entirely lacking, if only because the enormous mass of organs and musculatures needed (in contrast to the shallow mechanism of speech) cannot co-ordinate without it. (It explains why great singers are sometimes guilty of absurdly exaggerated emotionalism.)

(3) The singing voice is a specific quality manifest in one single tone. It has nothing whatever to do with *music* until actually placed in its service. Those who

⁷ Panconcelli-Calzia quoting R. Husson, *Die Stimmattung*.

may disagree have but to consider: The birds sing, they do not make music. The infant produces singing sounds without having learned as yet how to hear 'tonally' for the musical ordering of tones is, like speech, one of man's *intellectual* achievements.⁸ Tone-sense and musicality belong to fundamentally different categories, even in their origin (phylogenesis). It is well known that many people with magnificent voices filled with beauty of tone and expressive quality are nevertheless incapable of hearing intervals, are 'hopelessly unmusical' (wholly atavistic types, perhaps?). And, *per contra*, that there are extremely musical singers whose feeling for tone quality can hardly be said to exist. With some exaggeration it can be said that the true cantatory sense is to a certain extent opposed to music—at least to its harmonic element.

To recapitulate: The organs and muscle-systems that produce the singing voice are capable of connecting up into a wide variety of mechanisms.

The instrument of *singing* is a natural one, unlike that of *speaking* which is, in a certain sense, a superimposition.

Speaking (intellectual) is not singing (affective) and singing in itself is not yet music-making. In speaking and in the singing of even the simplest kind of *music*, the voice is engaged in services directed by the intellect.

Biology's mode of reasoning (theory of chance—purposive natural selection), altered of course and only imperfectly understood, has insinuated itself more and more into our subject. Laryngologists speak of a 'chaos of phenomena in phonation'; understandably enough, for with their small mirrors, and because of the innumerable disorders constantly passing before their eyes, it is only too easy for them to lose sight of the whole picture. Exact science apparently considers the organism of singing to be something that man—by some Promethean cunning as it were—acquired rationally; yet nevertheless believing, like Democritus the Greek who thought in terms of atoms, that man learned his singing from the birds. And too many members of our profession are unwitting supporters of the theory that there are no predetermined laws in nature.

Meanwhile, the Beautiful—though to us it may seem pure luxuriance—is without doubt one of the integrating constituents of organic being. Where it is not manifest, only stunted forms—such as the 'normal' human vocal-organ—can be concerned. But our rationally disposed mental processes, while seeking too much for the materially expedient, only know how not to find the meaning in it. (Where is that delightful saying to be found: 'The birds sing more than Darwin really permitted'?) Be that as it may: the voice-trainer has before him a perfectly constituted instrument. Because it is always normally in a weakened and impaired condition, a condition closely connected with modern man's purposive efficiency, he has first of all to know how to draw it out, how to create the instrument anew—out of something, however, that already exists. And this aspect, so we believe, should give him confidence and courage.

⁸ C. Stumpf, *Anfänge der Musik*.

HANS WERNER HENZE'S ITALIAN MUSIC

Hansjörg Pauli

1. MODELS FOR BEGINNERS IN CRITICISM

Since 1953, the Westphalian composer Hans Werner Henze has been living in or near Naples. One might therefore call the most recent works of his career—a career which began about thirteen years ago, directly after the second world war—his 'Italian music'. And it is with this 'Italian music' that the following article is concerned, or rather, with the story of its somewhat queer reception, especially in Germany.

After the première of *König Hirsch*, which took place in Berlin on September 23rd, 1956, the well-known German critic, Hans Heinz Stuckenschmidt, wrote:

'At thirty, Henze has already achieved a maturity and a breadth of artistic outlook which places him in the forefront of his generation. His musical invention knows no limits; listening to this prodigious score, as its ideas chase each other, we have again and again the impression of an overflowing, baroque imagination' . . . 'All dogmatism overcome, the triad is granted the same rights and privileges as the eight-, ten- and twelve-part chord. The range of reminiscence is vast, reaching from *Don Giovanni* and the Neapolitan folksong up to *Wozzeck*, *Salome* and *Sacre du Printemps*. But Henze's individual utterance gives the whole work a remarkable continuity and unity of atmosphere.'¹

About a year later, the selfsame Mr. Stuckenschmidt decided in the case of *Maratona di Danza*, Henze's sarcastic account of the intrusion of the 'American way of life', that

'What seemed to be reflexion in *König Hirsch* now appears, at times, as calculation'.²

Furthermore, he quoted the brilliant beginning of Jean Cocteau's *Orphée*,³ where Le Monsieur, once a writer himself but now only an impassioned observer, reproaches the poet: 'Orphée . . . votre plus grave défaut est de savoir jusqu'où on peut aller

¹ Hans Heinz Stuckenschmidt in *Melos*, October 1956. The original text runs as follows: 'Henze hat, dreissigjährig, eine Meisterschaft und Weite des künstlerischen Horizonts erreicht, die ihn an die Spitze seiner Generation stellt. Seine musikalische Erfindung schöpft aus dem vollen; ja, man hat immer wieder beim Hören dieser erstaunlichen Partitur den Eindruck einer überquellenden Phantasie, eines barocken Sich-Jagens der Einfälle.' . . . 'Jede Dogmatik ist überwunden, der Dreiklang steht gleichberechtigt neben dem acht-, zehn- und zwölfstimmigen Akkord. Die Anklänge sind vielfältig, sie reichen vom *Don Giovanni* und vom Neapolitanischen Volkslied bis zu *Wozzeck*, *Salome* und *Sacre du Printemps*. Aber Henzes persönliche Handschrift sichert dem Ganzen eine Kontinuität und Einheit der Atmosphäre ohnegleichen.'

² Hans Heinz Stuckenschmidt in *Melos*, December 1957. 'Was in *König Hirsch* als Besinnung wirkte, erscheint hier mitunter als Berechnung.'

³ Jean Cocteau: *Orphée*. Editions de la Parade, Paris, 1950.

trop loin.' (I wonder whether Mr. Stuckenschmidt intended to make an allusion to the end of the scene in question? For in Cocteau's play, Orphée answers: 'Le public m'aime', and Le Monsieur dismisses the case by saying: 'Il est bien le seul').

But in fact it hardly matters whether or not Mr. Stuckenschmidt wanted to go to such lengths. We can fully rely upon Hans Curjel, who at about the same moment, in his review⁴ of the Donaueschingen performance of Henze's *Nachtstücke und Arien*, appreciated the composer's extraordinary talent but finally summed up his impression in the German word 'Kulinarismus', a term which, applied to composition, means more or less 'musical escapism'. And we can equally rely on Klaus Wagner who recently asked, à propos the *Kammermusik 1958*:

'But where are we led by this latest neo-classical homage to an ideal of beauty which carefully avoids the darker colours, the greater tensions, the ecstasies, reflecting them only like a mirror—a message in a bottle found on the shores of Arcadia?'⁵

2. NEW MUSIC OR OUTMODED MUSIC?

That really seems to be the question. For a resumé of what the above-mentioned gentlemen had in mind when they wrote their articles would surely be: 'That sounds far too nice to be modern music!'

The attitude of our critics becomes partly understandable, however, when we take into account the development of German music since the second world war.

When, after twelve years of almost perfect isolation from international musical life—twelve years of disastrous cultural politics—the frontiers opened again, the younger composers first came under the influence of Paul Hindemith and Igor Stravinsky, an influence that is seen in practically all the scores written around 1946, e.g. by Bernd Alois Zimmermann (born in 1918), Hans Ulrich Engelmann (1921), Giselher Klebe (1925), and indeed Hans Werner Henze (1926). Very soon, however, the composers of this generation discovered Schoenberg. And, as Reinhold Schubert pointed out a few months ago,⁶ at first misunderstood him. They used the Schoenbergian technique not so much for the purpose of constructing complicated and essentially polyphonic relations, but rather as a help towards achieving subtle *timbres*, highly divided chords and roving melodies. To give an example: Henze tells us that when conceiving his *Concerto for Violin and Orchestra* (1947) he had the idea of 'widely arching, delicate cantilenas, of sensitive colours', and that he therefore decided 'to work with rows, as best he could'.⁷ This early dodecaphonic stage, whose technical

⁴ Hans Curjel in *Melos*, November 1957.

⁵ Klaus Wagner in *Melos*, January 1959. 'Doch wohin führt diese jung-klassizistische Huldigung vor einem Schönheitsideal voll lieblicher Bläue, das die dunkleren Tinten, die stärkeren Spannungen, die Uebersteigerungen und die Abstürze geflissentlich aus zweiter Hand darbietet, im Spiegel, als Reflex—als Flaschenpost in Arkadien?'

⁶ Reinhold Schubert: *Bernd Alois Zimmermann*. In *Die Reihe*, vol. 4, Vienna 1958.

⁷ 'Vorstellungen von weitgeschwungenen, zarten Kantilenen, von gepflegten Klängen' . . . Reinhold Schubert, *op. cit.*

side can be studied particularly in the production of Wolfgang Fortner, was followed by an insistent discussion of the basis of Schoenberg's method, its structural sense. Webern, and what were called (with some precipitation perhaps) the Webernian innovations, were 'exhumed' and misunderstood again. The familiar pursuit of the chimera of strictly and integrally organized music, today's 'modern music', began.

Zimmermann, Engelmann and Klebe, together with Stockhausen and Koenig, are now known as the exponents of the German *avant garde*. Not Henze. He, who also dealt with both melodic and rhythmic series in some of his earlier works, has literally taken another way. In one of his short articles, entitled 'Where do we stand now?', we read:

'We live in the formative years of modern art. The present-day bourgeois of the apartment-house is amazed to discover that there can still be an 'unlawful' music, or a non-abstract painting, and he is taken aback by any deviation from the characteristic sound of dodecaphony, with which he had just started to feel at home. The freedom offered by dodecaphony in earlier days is in fact no longer felt as a refreshing impulse; it has become a vogue and a bore. Curiosity and adventure must be kept alive; one must never relax. An advance into an unknown territory need not always be technical in origin, nor need it necessarily point "forwards". (Besides, who can tell which direction is "forwards"?)'⁸

Furthermore, in Josef Rufer's book *Musiker über Musik*, Henze writes of an 'ever-advancing academicism in the name of the great Webern, who has no possibility of defending himself':

'Composition has lost itself in sterile technique, and the capacity for shaping even a simple musical thought is almost imperceptibly disappearing.'

And he quotes, as the very opposite of the generally rather arid products of the new style, the Neapolitan canzona in the second act of *König Hirsch*:

'It simply places the necessary expression in the melody and rhythm, while the guitar is the only possible accompaniment. No orchestral colours, no serial structure, no sinus tone. Just a melody with a simple accompaniment.'⁹

It is certainly not accidental that Henze insists upon the beautiful simplicity of the canzona. As a matter of fact, in his 'Italian music' the canzona plays an important

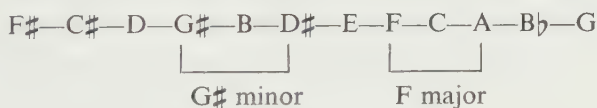
⁸ Hans Werner Henze: *Wo stehen wir heute? in Darmstädter Beiträge zur Neuen Musik*, Ed. B. Schott's Söhne, Mainz, 1958. 'Wir leben in den Gründerjahren der modernen Kunst. Der neue Bourgeois in seiner Stahlrohrwohnung wird epatiert durch die freie Existenz einer nicht "gesetzmässigen" Musik, ein nicht-abstraktes Bild, und es befremdet ihn schon das Abweichen beispielsweise von der Klanglichkeit der Dodekaphonie, die er sich gerade erst 'zu eigen' gemacht hatte. Denn die Freiheit, die vor langer Zeit in der Dodekaphonie lag, ist nicht mehr frisch, als Mode ist sie schon zum Ennui geworden. Das Wundern und Abenteuern muss weitergehen, es gibt kein Ausruhen. Ein Schritt in unbekanntes Gebiet muss nicht immer auf technischer Grundlage erfolgen und muss auch nicht unbedingt nach "vorwärts" gerichtet sein (wer kann sagen, wo "vorwärts" liegt?).'

⁹ 'Die Musik gerät in das Grau trockener Algebra. Aber unmerklich verliert sich jede Fähigkeit zur Darstellung eines einfachen autonomen musikalischen Vorgangs' . . . 'Ihre Erfindung besteht darin, semplicemente den erforderlichen Ausdruck (der Canzone und ihres Daseins innerhalb des Ganzen) in den Fall der Töne und Rhythmen zu legen, und die Gitarre ist die einzige zulässige Begleitung. Keine Orchesterfarben, kein "seriales Material," kein Sinuston. Eine Melodie und eine simple Begleitung.' In Josef Rufer: *Musiker über Musik*, Darmstadt, 1956.

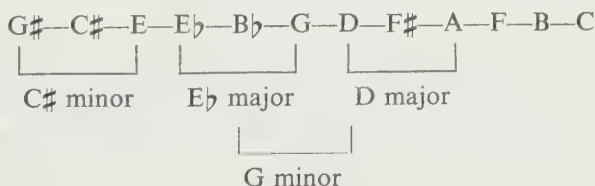
part in the literal as well as in the figurative sense. For there are genuine canzonas in *König Hirsch*, in *Ondine* and in the *Kammermusik* 1958. Moreover its *cantabile* character—the predominance of comparatively simple melodic and rhythmic relations—is typical of Henze's latest works. Now a *cantabile* style, simple relations and, we might add, intelligible harmonic structure, are not exactly the prevailing traits of 'modern music'. The result is, that as the distance between Henze and the *avant garde* of Darmstadt increases, so his reputation diminishes.

It may be useful then to recall that it was Henze who chose the canzona, and not the canzona which chose him. In other words: Mr. Prieberg, who in his strange *Dictionary of New Music* treats Henze's latest pieces with the utmost condescension, is utterly wrong in saying that although once an *avant garde* composer, he now appears to be somewhat 'old-fashioned'—and in speaking of a 'profound change of style'.¹⁰ The canzona has in a sense always been a constituent part, subcutaneously perhaps, of Henze's music. Take such an early work as the *Kranichsteiner Kammerkonzert* (1946) for flute, piano and strings: whereas the outer movements are conceived in a typically Hindemithian style (I believe the first one is even entitled *Lebhafte Halbe*), the middle section, *Rezitativ und Arie*, consists of an interrupted *cantilena* for the first violin, a simple air (constructed in a firmly non-Hindemithian manner) with a simple accompaniment. True, this middle section is not altogether integrated, but here the composer does say something, whereas in the outer movements he does not; and he already tries to say it in his own direct way. The essentially melodic aspect of his early dodecaphonic attempts has been mentioned. We find it in the more mature serial music which emerged after he had studied with René Leibowitz. But more important still: the melodic style contains many profoundly traditional elements. The rows generally include strong tonal implications, often triads, as shown in the following examples:

Klavier-Variationen (1948)



Apollo et Hyacinthus (1949)



The themes derived from these series invest the fifth with great importance (see the structure of the seventh variation's first bars, Ex. 1a, especially the relation between antecedent and consequent); and major and minor thirds are likewise thrown into

¹⁰ Fred K. Prieberg: *Lexikon der Neuen Musik*, Ed. Karl Alber, Freiburg, 1958.

relief.¹¹ The harmonic progressions, though serially integrated, remain sometimes fairly close to classical models (as at the beginning of the *Andante* section in *Apollo*, Ex. 1b).¹²

Ex. 1a

Piano

Var. 7 $\text{♩} = 76$

BS 5

BS 10

BS 11

I 11

Ex. 1b

Cemb.

Andante

RI 7

RI 2

In short, the works of Henze's which once passed as being 'advanced', show practically the same retrospective features as his 'Italian music' which is now considered 'out-moded'. The two periods of his production are logically connected. But what, then, has become of the progressive procedures in his earlier pieces? Have they just vanished, or have they left any traces, perhaps subcutaneously again? In other words: can the influence of Schoenberg, even of Webern, be demonstrated in Henze's recent works? A short and necessarily one-sided analysis may suggest the answer.

3. THE *SONATA PER ARCHI*

The *Sonata per archi*, written in 1957/58 for the Swiss conductor Paul Sacher, is divided into two parts: an *Allegro*, laid out in sonata form, and a series of thirty-two variations on an eight-bar theme.

The sonata movement is composed of five sections (henceforth called A, B, C, D and E). A, bars 1 to 55, and B, bars 56 to 75, together form the exposition. The structure of A, somewhat Stravinskyan both in rhythm and harmony, is rather complex, because Henze simultaneously introduces a full-grown first subject (in the cellos and double basses), an important motif, and three intervals with thematic significance. It is most instructive to see how the composer integrates all these elements. The minor third (in the form of broken diminished sevenths in semi-quavers which run throughout the first 23 bars) and the fourth (exposed chordally) play an important part in the first subject; the motif again consists of a fourth and a major second (later used vertically too) and is at first superposed upon the first subject's last bars.

¹¹ The same example is given by Rudolf Stephan in his remarkable article on Hans Werner Henze, published in *Die Reihe*, vol. 4, Vienna 1958.

¹² The abbreviations are, as usual, BS for Basic set, I for inversion, R for retrograde form, RI for retrograde inversion. The numbers indicate the degree of transposition, in semitones upward.

Ex. 2

Allegro, ♩ = 126

Violin I, Violin II, Viola, Cello, Double Bass

ff et seq.

Bars 16 *et seq.* are still more important from our point of view. Their structural function is that of a bridge-passage to A's second segment, which properly introduces the major second and furthermore superposes the motif as well as its retrograde form on a three-note figure taken from the first subject. The beginning of this bridge passage, superficially connected with the preceding events through the semiquaver movement of the second violin, is a brief lyrical theme in the solo cello, which evolves from bars 5 to 7 of the first subject and is linked with the motif. Whereas the four notes taken from the first subject are used in almost their original rhythm, the melodic outline has changed: two of the notes are octave-transposed. The new theme leads to three bars where the motif—still played by the solo cello—rises above highly sub-divided chords. And these three bars are now sustained by a *pizzicato* figure in the double basses, which is nothing else than the inversion of our new theme, divested of its rhythm and shifted up a major second.

Ex. 3a

♩ = 126

Violin I, Violin II, Viola, Cello, Double Bass

p, pp, f, piano leggero, pp

Another bridge passage with another *cantabile* theme in the solo cello (which combines the motif and the anticipated interval of the semitone into one melodic unity) leads up to B, the second part of the sonata movement where, within a large subsidiary subject—marked *dolce*, and introduced once again by the solo cello—the minor second is exposed. This second subject, though much smoother in its melodic and rhythmic character, is related to A: it includes the minor third (in successions which suggest the diminished seventh), as well as the fourth and the major second. In principle it is integrated in the same way as in A's first bridge passage: the double basses, *staccato* this time, play the derhythmicized first subject on a lower dynamic level, as an accompaniment.

Ex. 3b J = 80

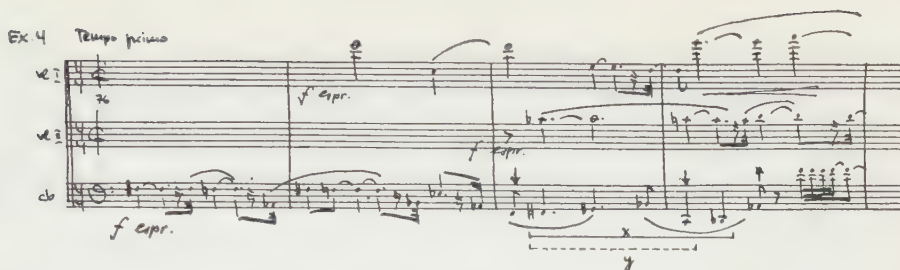
The second subject is immediately followed by a third, which marks the beginning of the closing section. Its accompaniment re-introduces the Stravinskyan rhythm of A together with its retrograde form; and it connects the motif with a compression of the theme of the first bridge passage, with the interval of the fourth, and with the three notes with which the first violin enters in the second subject. The melodic line of the third subject's inversion, though not its rhythm, appears again in the double basses, and leads from this part to the entirely static end of the exposition.

It is more important, however, to examine the development section (C). Its first part (bars 76 to 86) refers to A: see the chain of minor thirds, the dotted rhythm, the basic movement (in quavers this time) and the fourth, presented in chordal texture once more. It is dominated by three strands which, on the same dynamic level, are superposed on each other. They revert to the thematic operations hitherto used for purposes of integration: the connexion of various melodic shapes, their transposition to other degrees, their amalgamation with new rhythmic entities (all of which remind us of the first subject), and the octave-transposition of certain notes of the initial subjects. All these operations, together with the inversion of the initial shapes, the ornamental repetition of particular notes and intervals, and indeed what we might call their 'polyphonic exposition', are also used in the construction of the three strands, which are presented, in superposition again, in the second section of C (bars 87 to 96) which grows out of the character of B, but in re-introducing the semiquaver movement and the dotted rhythm, soon veers round to A.

To sum up: in the development section of the sonata movement, Henze treats the subjects very much like melodic series. Two questions at once arise:

1. How does he treat the serial aspects?
2. Why does he introduce them?

As to 1: He takes great care in varying the original themes. For example, since the inversion of the third subject is not readily heard, it is presented without any veiling octave-transposition (except for the last note but one); moreover it remains close to its original rhythm. And the second subject, with which C begins, is rhythmicized in the same way as the first; therefore it also uses only a few octave-transpositions, and these have a very special structural significance. For the double-basses' line contains an astonishing irregularity:



As a comparison with the original form of the second subject (Ex. 3b) immediately shows, the line is based on the first violin part (bars 60 *et seq.*), shifted up eleven semitones. Now the degree of transposition transitorily changes in bar 78: the five notes, referred to as x, belong to the initial shape shifted up a minor seventh, i.e. only ten semitones. To offset the unexpected intervallic succession which this deviation produces, Henze attracts the listener's attention by superposing the themes of A's first bridge passage, now abounding with octave-transpositions, and by the octave-transposition of the very notes which precede and follow x. Why did he introduce this irregularity? In my opinion, mainly for the sake of the sound (one has only to replace x by the five-note shape which ought to be there, i.e. G—A—B—C sharp—D, to hear what I mean). But there is another octave-transposition within x. It marks the end of a four-note sequence, referred to as y, which can obviously be heard as part of the second subject at its original pitch. I would even suggest that that is how it is meant to be heard, for later on the same succession enters 'too soon' in the first violin part (which again is based on the first violin's share of the second subject): a new irregularity, which serves to connect the two sections of the development, and which also explains the one bar that displays serially integrated polyphony.

These few remarks may be enough to show Henze's realistic attitude towards technique. He puts practical considerations first, and always interprets the 'rules' liberally; at the same time, he is able to justify the liberties he takes by giving them structural significance.

As to the second point: Considering the extreme shortness of the development section, the serial method makes it possible for Henze, contrary to all the classical procedures, to remain close to the initial subjects without literally repeating anything he had said before. But why, one is now tempted to ask, this brevity? And why the resolve not to stray too far from the exposition? All these problems are of course connected with the fact that the sonata's recapitulation, running crab-wise, is highly compressed and re-introduces, apart from the third subject, only the intervals and the motif. On the other hand, such a bewildering compression needs explanation in itself. . . .

The case becomes much clearer as soon as we take the whole work into account. We then notice that the proper development of the initial subjects occurs in the second movement. Whereas in the third section of the sonata movement Henze presents the various melodic shapes simultaneously, leaving their intervallic structure untouched, in the theme of the variations he introduces their most striking elements

in succession—the first subject's three-note figure already used in A, the motif, the broken diminished seventh, the second subject's chain of whole tones—welding them into one melodic line. (We note that the relation between the second movement's theme and the first movement's subjects has been gradually prepared by the relation between A's and B's subjects and their respective intervals, as well as by that between the third subject and the preceding shapes.)

Ex. 5

Interval of semitones

Tema
Molto, $\text{♩} = 92$

vc I
Solo

f

smorz. p

Elements of the first series

cb #f
cb A-13

vc #f
vc A-13

vc A-13

vc #f

We ought now to describe the 32 variations, to explain how the composer exploits the various intervallic successions together with their rhythmic shapes, evolving new, secondary themes out of them, and how he winds up by re-introducing some of the rhythmic and harmonic elements of A. But we started out with the question, as to whether there are any elements of 'advanced poetics' in Henze's 'Italian music'. To suggest a final answer, we can—*pars pro toto*—confine ourselves to the very beginning, studying the process by which Henze connects the initial theme with the new shape that first shows up in Variation V.

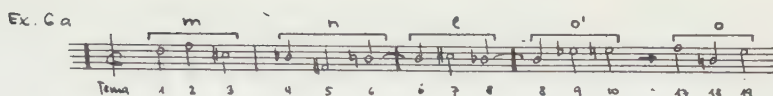
Var. I

Entirely phrased in (non-octave-transposed) three-note groups, which are sustained by a simple chromatic line in the double-basses, the theme draws our attention to its internal organization as well as to its intervallic structure.

Internal organization: Ex. 5 shows the theme's subdivision into two halves (notes 1 to 11 and 12 to 21), the second one starting with the inverted initial group of the first. Two more three-note groups are treated in a similar way. Thus the theme in itself already introduces serial procedures.

Intervallic structure: Within the various three-note motifs, the succession of 'neighbouring intervals' plays an important part. m (ascending minor third/descending major third) and n (descending major third/ascending fourth) are stated in the first six notes. A similar motif to l (ascending major second/descending minor third) does not coincide with the three-note motif of the first variation; nor indeed does o (descending tritone/ascending fourth) which, on the other hand, is stressed through the fact that it appears twice, the first time in an intervverted form as ascending fourth/ascending semitone, henceforth referred to as o'. Thus, even the interversion, the one melodic process which will become of the utmost importance, is prepared within the theme's structure.¹³

¹³ The three notes of the various groups are henceforth numbered 1, 2 and 3. Their interversion is shown by the order of the respective digits.



Var. II

Here the theme is completely dissected; its notes are used as a melodic series. The leader plays the first part of the series as a kind of *cantus firmus*, against a background of double-bass pedals. The other three string parts, vertically integrated, fall into three segments (Ex. 6b). The outer segments each trace the first six notes of the theme's inversion, i.e. mI—nI; while the central segment introduces a new unit of six notes: C sharp—C—A—A flat—E—G. This could again be sub-divided into two three-note motifs: mI 312, an interversion of the inverted initial motif, which is nothing else than the beginning of the sonata movement's second subject at its original pitch (if octave-transposed); and mI 321, the retrograde form of the inverted theme's first three notes. A glance at the rhythmic structure proves, however, that other subdivisions are possible: C—A—A flat as m 213, and A—A flat—E as n 312. (The succession F—C sharp—C, nI 213, which arises from the connexion of the first and second segments, is also worth mentioning. It is integrated through the fact that F is the tonal centre of the chord, out of which the second subject grows; the succession E—G—D, linking up the second and third segments, is weakened by the rest preceding the D, and is therefore of minor interest.) Finally the violin part, which has a horizontal pull, introduces in its first three notes the inversion of o.

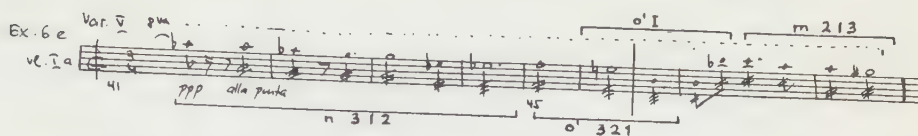


I am well aware of the fact that all this may sound rather 'dodecaphoney' (but isn't it, on the other hand, the purpose of our investigation to show how 'modern' a composer Henze is?). The structural significance of this second variation is, however, quite clear. Within a somewhat *pointilliste* movement, Henze is able to introduce, almost imperceptibly, new intervallic configurations. How thoroughly he makes use of these possibilities is seen from the fact that all the new successions have their origin in the interversion of the motifs exposed in the two outer segments, and that furthermore the first 'irregular' configuration is closely related to one of the sonata movement's most striking thematic shapes.

Var. III

A very different texture. Whereas the second half of the theme, played in two-part chords by the divided second violins, is somewhat reminiscent of the *pointillisme* of

the first violin, imitated by the viola, introduces a new shape whose construction is based upon the interverted three-note motifs previously stated one by one.



New music or outmoded music? There is no need, I think, for further explanation!

THE MACHAUT MASS AND ITS PERFORMANCE (I)

Safford Cape

Many adepts in early music think and talk a great deal about the Machaut Mass. It has, so to speak, and with reason, become fashionable; and either because of their true interest in the music, or because public demand makes the Mass a source of profit, musicians undertake—or would like to undertake—to perform it. Perhaps the eighteenth-century legend, that it was the coronation mass of King Charles V, has brought it unnecessary glamour. Be that as it may, the *actualité* of the Mass is a fact.

Several editions are obtainable. Some are greatly transposed, others, with the old C-clefs, are hardly suitable for current use. In my opinion, the most convenient is the one edited by the late Hans Hübsch,¹ and it is to his edition that references will be made.

Fascinatingly mysterious, glowing with a strange beauty whose deeper origins are probably impossible to discover, the *Messe de Notre Dame* (as Machaut himself called it) offers a hermetic visage. Its isorhythmic architecture (or symmetrical rhythmic patterning), which must be grasped if the work is to become intelligible, lies hidden. The decorative significance and the aesthetic rôle of its *hockets* are far from present conceptions, and must be learned anew. The proper *tempo*, the indispensable life-beat of the melodic flow, may or may not be correctly seized. The interplay of the preponderant vocal with the occasional instrumental element must be ascertained. In a word, if the Machaut Mass is to live again, and not as a mere travesty of its own delicate and intellectual nature, it must itself be called to bear witness upon its secrets, and to proclaim the laws which govern its own intimate being.

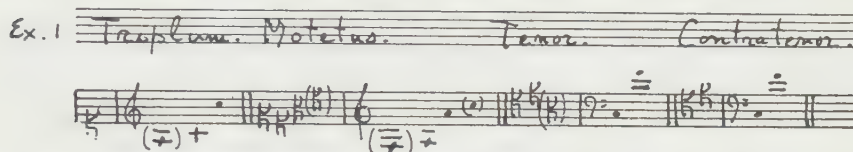
The *Messe de Notre Dame* stands alone as the first known complete mass—*Kyrie-Christe-Kyrie, Gloria, Credo, Sanctus, Agnus* and *Deo gratias*—written by one and the same composer. In the late thirteenth century, polyphonic treatment had been given only to isolated fragments of the mass, while in the fourteenth century the entire polyphonic Ordinary had appeared in the form of more or less heterogeneous assemblages (the Masses of Tournai,² Toulouse³ and Barcelona, to which may be

¹ Published by Willy Müller, *Süddeutscher Musikverlag*, Heidelberg.

² Charles van den Borren, *Missa Tornacensis*, *American Institute of Musicology*, 1947.

³ Leo Schrade, *The Mass of Toulouse*, *Revue Belge de Musicologie*, vol. VIII (1954), fasc. 2-3-4., pp. 84-96.

added the recently discovered fragments of the Besançon Mass.⁴ In the *Messe de Nostre Dame* the *Kyrie-Christe-Kyrie*, *Sanctus*, *Agnus* and *Deo gratias*, built upon Gregorian *cantus firmi* or *Tenors*, are isorhythmic in form and decorative (i.e. melismatic) in style. The *Gloria* and the *Credo* have no *cantus firmus*, are in extended Conductus (i.e. 'chordal') form, and consequently syllabic in style. The entire work is for four voices, two high and two low, whose respective ranges are:



The fourteenth century sees France, England and Italy in the field. Italy, with Landino and the other great Italian composers, stands very much apart from France and England. As in architecture, we find her musically quite 'ungothic': lavish ornamentation is here a vehicle of rhapsodic expression, and although Johannes Ciconia in the late fourteenth century does unite in his music the styles of the North and the South, it is not until the 'europeanization' of the polyphonic style, under the diffused influence of the Netherlanders in the sixteenth century, that Italian music becomes basically identical with that of her sister nations. On the other hand, France and England pair off in the development of the intellectual, scholastic style inherited from the thirteenth century.

It is not difficult to see how Machaut adopts and develops the style of Adam de la Halle. Both were men of genius, but it is clear how Adam's simpler and more rudimentary system imbues Machaut's, becoming in the process infinitely richer, but also precious and affected. When speaking of Machaut, one is obliged to stress his inspiration: the surge within him produces musical discourse of great breadth and scope, and enables him to create an organic whole out of material which remains a mere assemblage and juxtaposition of elementary formulas in works such as the Tournai Mass. A rapid comparison between the respective *Kyries* of the two masses immediately brings this point home:

Ex. 2

Machaut *Kyrie I*

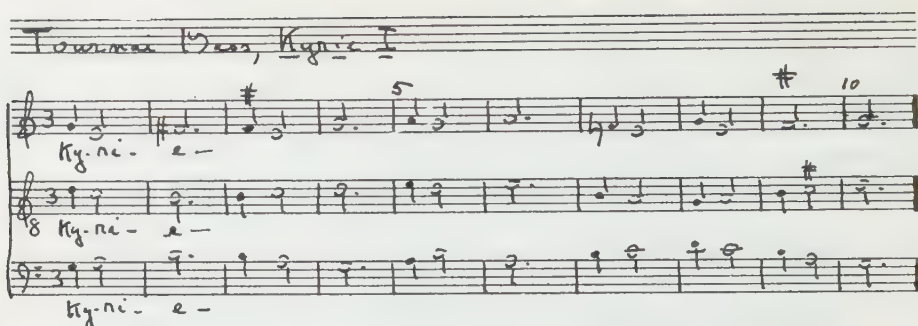
Ky- ni- (e) -

Ky- ni- (e) -

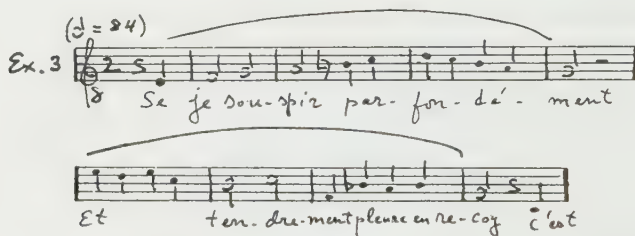
Ky- ni- e -

Ky- ni- e -

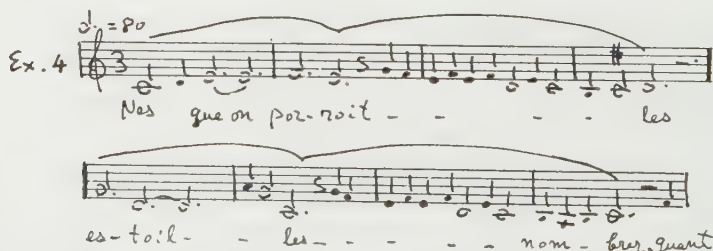
⁴ Jacques Chailley, *La Messe de Besançon*, *Annales Musicologiques*, II, pp. 93-103.



It may be that Machaut himself preferred to write secular music based on poetic form, rather than sacred music and motets. In his secular works (*ballades*, *rondeaux*, *virelais*) his faculty of lyrical invention was of course free to flow quite unhampered by the cruelly hard exigencies of isorhythm. But the inspirational surge in him did nothing to hinder his extreme inclination towards a refinement which does indeed attain to an affectation not at all unpleasant or blameworthy. On the contrary, the mastery with which he met the demands of his heart and head made him a perfect example of the typical scholastic subtlety which was a main characteristic of the fourteenth century. His sense of unity in melodic discourse is shown in *melopées* like those of the *virelai* *Se je souspir parfondement*:

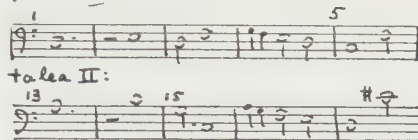


his sense of refinement very typically in those of the ballade *Nes que on porroit les estoilles nombrer*:



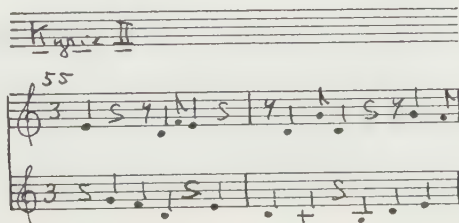
As might be expected, his melodic writing is less spontaneous in works based on the isorhythmic principle—the motets (sacred or secular) and the Mass. This principle calls for a chosen number of different rhythmic patterns, each belonging to a given voice-part, and repeated, always identical in rhythm but different in the pitch of the notes. An example from the Mass (*Contratenor* of *Kyrie I*) will make this clear:

Ex. 5 talca I:



In opposition to what may be called the narrative parts of the Mass (*Gloria* and *Credo*, excepting their *Amen*), the lyrical sections—involving short texts and therefore calling for lengthy melismatic development (*Kyrie-Christe-Kyrie*, *Sanctus*, *Agnus dei*, *Deo gratias*)—are all governed, to a very large extent, by the isorhythmic principle. The extreme complexity of this mode of composition made it necessary to write the music first and to adapt the text afterwards. (The opposite procedure—first text, then music—was used in writing ballades, rondeaux or virelais, for here the poetic form governs the musical.) To be exact, with the exception of the introduction to the *Sanctus*, the *Tenor* (*cantus firmus*) and *Contratenor* are strictly isorhythmic throughout these lyrical sections. But the two upper parts—the *Triplum* and the *Motetus* (a designation kept over from the old motet and referring to the new text or *Mots* applied to a melody borrowed from a pre-existing *organum*)—are, although not strictly isorhythmic, very largely dominated by that principle. During the fourteenth century and up to the middle of the fifteenth, it was the isorhythmic principle which made it possible to realize large musical forms. It embodied a mathematical conception of the harmonious, rooted in scholastic mentality, and the recurrent rhythmic formulas, in all their subtlety and complexity, conveyed that feeling of symmetrical development in musical space (i.e. in the auditive memory) which the mind requires of form, and which is surely the highest attainment to have been reached throughout the centuries in the field of formal musical construction. Whether its rigidity does not inhibit a free out-going of the creative imagination is of course another matter. (In this respect, a comparison between the Machaut Mass and the Five-part Mass of Byrd might show that the sheer poetic, and therefore emotional, beauty of the latter does not perhaps ‘wear’ so well—calling as it does upon nervous reaction—as the intellectual beauty of the former.)

The other pre-eminent feature of style in the lyrical part of the Mass is the *hocket*. Here we have the cutting-up of two melismas (hardly ever more) into short fragments, interrupted, even within the fragments themselves, by short or very short rests, and so organized as to counter-balance each other, with a frequent effect of what we should today call syncopation:

 $\Sigma x. 6$ 

The aesthetic justification of the hocket appears to lie in the effect created by these conflicting sound-points which strike the ear as points of light strike the eye. Looked at in another way, the hocket is a means of raising the music from the earth to the heavens till it seems to take on the quality of star-dust. A first, the hocket seems stiffly unnatural, despite the use of a similar procedure in late eighteenth-century music. It may also seem antivocal, and more in keeping with instrumental manners. But when it is put to the test with voices, and performed lightly and skippingly, its perfect appropriateness is most striking. Indeed, its figurations are evidently so much at home within the vocal apparatus that one is convinced they are more suited to the voice than to instruments. The hocket has a definite functional rôle in the Mass: Machaut uses it systematically to develop and close his melodic periods, and thus makes it play the part of decorative melisma, as will be seen in the following passage from the *Sanctus*. The first four bars state the words Dominus De-(us), while the following three bars develop and close the section with an ornamental melisma translated into hocket, vocalizing on the prolonged 'e' of *Deus*:

Ex. 7 *Sanctus*

16 20

Do- mi- nus- De- -

Do- - mi- nus De- -

- us

- us

Close analysis of detail will bring together a cluster of indications, from whose synthesis will appear the final figure of the Mass, its movement and its pace. As in all medieval music, the melody is essentially decorative (as opposed to essentially expressive); decorative, in that its melodies are plastic lines and curves whose intentions must be grasped and brought home to the listener. If one is conscious of these lines and curves, and of their delicate articulation—as they appear, take flight, grow, culminate and sink to repose—it will be possible to produce the special kind of expression—universal as opposed to personal, lyrical as opposed to dramatic—which lies behind the arabesques.

The fact that Machaut is so typically 'Gothic' does not mean that his melismas should not be conceived in a long line: to hash a melody is of course to kill it. This said, it is evident that Machaut's peculiarly 'Gothic' characteristic lies in the sharp little upward or downward thrusts that are enclosed within the full span of his melismas. These little 'saw-teeth' must be understood and appropriately stressed with minor accents, while at the same time great care be taken not to break up the line and so destroy its flow.

Ex. 8 *Christe eleison* (Triplum)

Of course, a melisma cannot be brought to life unless it moves in its true tempo. This question of *tempo*, which is of capital importance, will be discussed in connexion with the *Tactus*.

Generally speaking, it is necessary to distinguish the most characteristic isorhythmic elements, and to stress them in performance. Their repetitions will be marked by the listener, and as a result he will become conscious of the work's form. The isorhythmic structure of the terminal melismas also helps one to discover the best way of underlaying the syllables of the text: the text is often set down in a conventionally careless way, and its correct re-adaptation is of great importance, because it restores the natural phrasing and helps to throw into relief the true character of the melisma. The evolution and symmetry of isorhythmic passages are good counsellors in this respect. They also help to determine where instruments should be used.

As has been said, the entire Mass, with the exception of the *Gloria* and the *Credo*, is constructed upon different Gregorian *cantus firmi*, or *Tenors* (the voice-part which holds—Latin *tenere*—the basic melody upon which a composition is written). All the Gregorian *cantilenae* used are still found today in the Gradual:

Tenor of Kyrie I: Missa IV, Cunctipotens Genitor Deus, Kyrie I

- „ „ Christe: *idem* Christe
- „ „ Kyrie II and III: *idem*, Kyrie II
- „ „ Sanctus: Missa XVII, for Sundays in Advent and Lent, Sanctus
- „ „ Agnus Dei: *idem*, Agnus Dei
- „ „ Deo gratias: Missa VIII, De Angelis (apparently) Sanctus

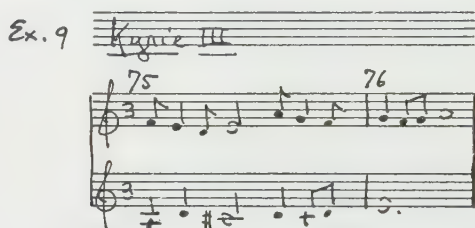
Two things seem strange at first sight: that the Gregorian themes are taken, not from the same mass, but from three different ones; and that the *Deo gratias* is not built on the theme of any known Gregorian *Deo gratias*, but on that of the *Sanctus* of Missa VIII. As Leo Schrade has shown,⁵ however, the different 'sets' of Gregorian Ordinaries found in the Gradual today are in many cases different from those used in the fourteenth century, the *Sanctus* from one mass being joined with the *Agnus*

⁵ Leo Schrade, *op. cit.*

of another, for example. It is therefore most probable that the Gregorian themes employed by Machaut all belonged, at one time or another, to the same mass. The most surprising anomaly, as already said, is the fact that the theme of Machaut's *Deo gratias* is no longer used at all for that part of the mass, and has only come down to us in the *Sanctus* of Missa VIII.

But before we approach each division of the Mass in detail, three matters of general interest should be gone into: the manner of transcribing the separate parts for performance, what decision to make concerning the respective participation of voices and instruments, and the choice of the voices.

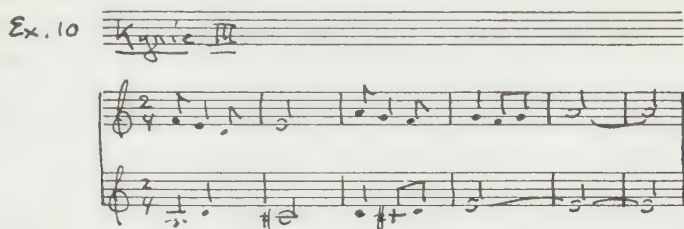
Today's reprints of early music usually preserve the ternary or binary rhythmic units intact, and divide them by means of barlines (which are almost always lacking in the originals) into modern measures, thus:



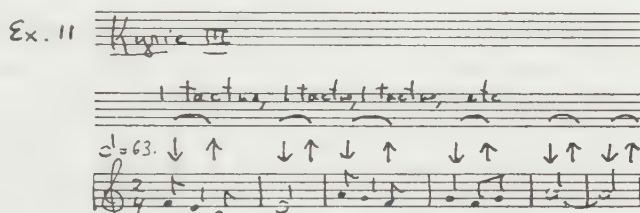
But the firmness of the rhythmic movement, the precision of the little syncopations and the security of the performers will all suffer, for the conductor's beat, being slow (♩ = about 63), will necessarily invite trouble, or else—if he splits beats—become too complicated. The fact is that beating such music in three (simple or split) does not give the correct physical feeling to the rhythm: the latter will not be 'ballasted' and at ease, for *the beat was not meant to be made in that way*. The different medieval 'measures' have their own physical feeling, of which more will be said later.

The saving principle is the *Tactus*. That modern transcriptions are not published with the barring based on the *tactus* but rather on the complete rhythmic pattern (or 'measure'), is correct and proper, for the cutting-up of these 'measures' into two or three subdivisions, each corresponding to one *tactus*, results in a parcelling of the score which prevents the eye from apprehending directly and naturally the rhythmic trend of the music. (Let it be said in passing that the somewhat child-like mania which prompts many transcribers to give the music a 'familiar' look, by *quartering* the note-values, has deplorable results. It gives a completely unnatural appearance to the music, and this appearance is not a matter of fancy but has to do with its very style, which is rendered dubious by the inescapable confusions with modern music which this value-quartering creates. The style of early music is a thing by itself which must be learned, and this can never be done on the basis of a so-called 'more familiar' appearance). But if it is unwise in most cases to publish scores on the *tactus* principle, it is almost always greatly to be preferred that the separate parts should be written out on this principle, and this process is often not only preferable but absolutely necessary. With the exception of *Kyrie I*, all the divisions of the Mass

should be transcribed, for performance, on the tactus principle. This gives the following reading for example 9:



According to the tactus principle, a bar which is transcribed with three basic beats is subdivided into three bars. Each of these new bars has only one beat, which is the tactus. The tactus is essentially composed of a downward (in earlier times, probably an upward) movement of the hand, followed by the natural and upward movement of 'waving' which prepares the next downward stroke.



The use of the tactus, correctly understood, not only assures rhythmic firmness and clarity, but also often permits the satisfactory performance of otherwise 'impossible' passages.

We must find some firm and constant tempo which our experiments will allow us to apply to the tactus. The tactus is the unvarying, uniform beat applied to a note of fixed and definite duration. In Machaut's Mass this beat applies to the *brevis*, and in so doing, designates the *Modus, integer valor*. We may also have the *Modus diminutus*: here two *breves* will fall to the beat instead of one (i.e. each *brevis* will have only something like half its normal duration). The *Modus, Tempus* and *Prolatio* appear of course with still other variations, but the first two mentioned are, I think, the only varieties which need to be coped with in connexion with the Mass.⁶

It is known today that the time-value of the tactus was something close to one second, i.e. $tactus = \pm 60$. It varied slightly through the centuries, but careful comparison between many works of a given period makes it possible to arrive at a close

⁶ To students of *Ars antiqua* and *Ars nova* music, it is doubtless evident that certain practices (particularly *integer valor*, *proportio dupla* and *tripla*), having to do with slow, moderate and quick tempo, and resulting from the proportion principle, had been customary since the thirteenth century although not explicitly defined and codified until the fifteenth. (Concerning this, and also the time value of the tactus, see Willy Apel, *The Notation of Polyphonic Music 900-1600*, Cambridge, Mass., 1944, pp. 341-343, 188-195, and Apel, *Harvard Dictionary of Music*, Cambridge, Mass., 1946, p. 731.)

approximation. In Machaut's Mass, the *brevis* (and not the *semibrevis*) is the tactus unit, and in Hübsch's edition the *brevis* is transcribed by the modern minim. The time-value of this note, throughout the Mass (with the exception of *Kyrie I*), is ideally 63 to the minute. I say 'ideally', because very slight variations, falling between 56 and 66, might sometimes be found preferable: for instance, 66 might be better for the *Gloria* and the *Credo*, the syllabic declamation tending rather to hasten the rhythmic flow. On the other hand, very florid parts might call for a little more ease, so that the *Christe eleison* could be taken at a speed of 56.

In my opinion, *Kyrie I* must be treated differently from the rest. Its flow is not the same as that of the other melismatic divisions and it contains no (modern) quavers as the others do. This *Kyrie* therefore seems to be, not in *integer* (full) time, but in *tempus diminutum*, or more exactly, the *brevis* being the time unit, in '*modus diminutus*' (diminished time). The question is, what is the exact proportion between *integer valor* and *tempus diminutum*? At first sight, one would expect the time-unit to be halved, this halving being represented graphically by the sign ϕ . But the proportion may have been different.

Willy Apel suggests that the ratio between this full and diminished time is 3 : 4. If this suggestion is accepted, and the *integer valor* in the Mass admitted to be ♩ (modern)=63, then we have the following proportion:—3 : 4=63 : 84. And if we adopt this solution, *Kyrie I* (♩ (modern)=84) will flow naturally and easily, whereas if we apply to it the *integer valor* (± 63), it becomes unnaturally static. Considerations based on these principles have led me to interpret—perhaps too boldly—the respective Amen-sections of the *Gloria* and the *Credo* as periods alternately in diminished and in full time, for I was inclined to believe that internal evidence required this discrimination.

How can one reach the physical 'feeling' of full and of diminished time? The full time is firm and stable, solidly supported by its pillar-like *integer valor* tactus notes. The diminished time is somewhat gliding, and the space between its third and last pulsations and the following new first pulsations falls within a short breath; or rather, the third pulsation corresponds to a somewhat quick in-drawn breath, the following first pulsation to the subsequent breathing out. The second pulsation occurs while the breath is resting. In short: 3rd pulsation—1st pulsation—2nd pulsation is equal to (rather quick) inspiration-expiration-resting.

Is the Mass purely vocal, or vocal-instrumental? In all the manuscripts, three voices (*Triplum*, *Motetus*, *Tenor*) have the text, the fourth (*Contratenor*) being without words or with only a partial underlaying. This could mean that the *Contratenor* is only to be played. However, as it does have a partial underlaying, and particularly as it is treated so much like the *Tenor* and collaborates so closely with it (the two often make 'countersteps' together), it appears quite clearly that we are in the presence of a complete vocal texture. Another very strong argument in this direction is the fact that all four voices have the same syllabic declamation of the text in the *Gloria* and *Credo*: it would be foolish to have an instrument playing repeated notes which have been essentially conceived to convey the words.

The Mass is therefore continuously vocal. But are instruments needed? The answer is, they are certainly needed in the *Gloria* and the *Credo*, where one-bar passages, traditional in character⁷ and impossible for the voices, are used to separate the subdivisions of the text. A peculiar, asymmetrical occurrence in the *Sanctus* (bars 10-11) suggests an instrumental interlude, the implications of which may be followed up throughout this division. Instruments may also be used, without special indications, to replace the low voices in the *Christe eleysen*, where they may support the two upper voices and thus form a contrasting subdivision, quite in the 'Gothic' taste, within the *Kyrie-Christe-Kyrie* triptych. In the same way, instruments may play the three lower parts in *Agnus II*, the upper voice singing alone: this procedure balances and diversifies the *Agnus* triptych.

In these passages, needing or suggesting instrumental intervention, the organ might well be used, or instruments of the bombarde family—bassoons, English horns, oboes—together with recorders, as well as plucked instruments—lute, harp. It is also possible to use viols, if the performance does not take place in too large a hall. Trombones should be excluded, diatonic instruments of this type not having come into use before the fifteenth century.

The singing group should consist only of soloists (one voice to each part). It is known today that, up to about 1430, choral singing was practised—so far as the liturgy is concerned—only in performing Gregorian chant, whereas solo singing was used for polyphony.⁸ The exception probably was, that when boys' voices were required, two or three of them could be assigned to one part.

What kind of voices should be chosen? The *Triplum* written in the first-line C-clef calls for a boy or boys (or else a falsetto). So does the *Motetus* (mostly in second-line C-clef), except in the *Gloria*, where a tenor is necessary (the part being mostly written in the third-line C-clef). The two lower voices (*Tenor* and *Contratenor*), written in fourth- or fifth-line C-clefs, were certainly baritones with a good upper register. If this original vocal 'scoring' is to be followed today, the Mass should be transposed down a semitone or a tone, it being quite certain that this was approximately the difference in pitch between Machaut's time and our own. This is shown by the consistency with which the tenor and baritone parts seem to be written too high. Our present tenor was then called *Altus* (high): the part here goes frequently up to a'. If this a' is considered to be a modern g#' or g', any untoward vocal strain will disappear. The same applies to the next lower voice-part, then called Tenor (our baritone). In addition, external evidence may be drawn from early wind-instruments and organs, and also from written statements.⁹

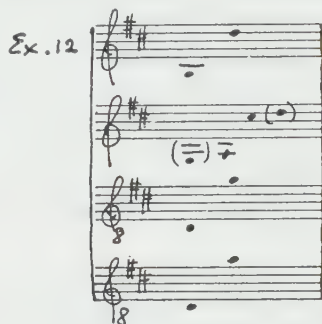
Very probably, however, one will be required to perform the Mass with four mixed voices. The prime concern here is to keep as nearly as possible to the tone

⁷ See the Tournai Mass.

⁸ See Bukofzer, *Studies in Medieval and Renaissance Music*, W. W. Norton and Co., New York, 1950, pp. 176-189.

⁹ Apel, *Harvard Dictionary of Music*, *Pitch*.

colour of the original. At the same time, a pitch must be chosen at which all the voices will be at ease. The best solution is to transpose up one tone, putting two sharps in the signature. We then have the following ranges:



A light mezzo-soprano, or a soprano with good low notes, for the *Triplum*, a light contralto for the *Motetus*, and normal (but discreet) tenors for the *Tenor* and *Contratenor*—a group made up in this way will reproduce that clear tone colour which, from the thirteenth century to the second half of the fifteenth, was considered to be ideal (*vox alta, suavis, et clara*).

Kyrie I

Ex. 13

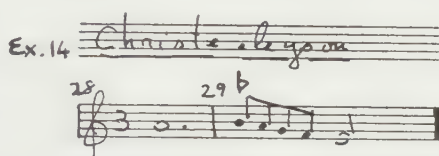
Kyrie I

Triplum	Int.	----	a	----	coda	Int.	'----	a	----	coda
Motetus										
Contra	A1			A2					(A3)	
Tenor	Ia	Ib	Ic	Id		Ie	If	Ig		
bar	1	5	9	13		17	21	25		

(The diagrams show the isorhythmic structures of each of the Mass's lyrical divisions, and the manner in which their recurrent appearances are organized. Sections identical in rhythmic pattern are indicated by a given letter—thus, the first section marked A is identical in rhythm to the other sections under the same letter. Free introductory passages are marked Int.; passing figuration is marked pass.)

The Gregorian *cantilena* (first *Kyrie* of the present Missa IV), in the *Tenor*, is cut up into seven rhythmically identical sections or *taleae*. On the first three is built the first half of the *Kyrie* (bars 1-12), on the following three, the second half (bars 13-24), and on the seventh (bars 25-27), the coda. This binary construction (i.e. first half, second half), may be taken as a guide to a suitable underlaying of the text, so far as the upper voices and the *Contratenor* are concerned. The *Tenor*, being essentially the Gregorian *Kyrie I*, should state the words only once, the other voices may do so twice.

This *Kyrie* seems to imply diminished time ($\text{♩} = 84$). Its flow, easy and supple, creates a Gregorian effect, simple, devout and contemplative. The first *cantilena* of the upper part is designed in two curves (bars 1-7 and 8-13), while the second *cantilena* of this part goes from bar 15 to 21 (first curve), and from 22 to 24 (second curve), finishing with a three-bar coda. The fragment ascending one tone and descending five (bars 1-3) is perhaps the pre-figuration of the very striking and expressively rich motif which appears thirty-six times during the Mass and is really the earmark of the entire work. As it first occurs in definite form at the beginning of the *Christe*, it might be called the 'head motif' of this section.



A 'mild' hocket (bar 10) marks the third *talea* of the *Tenor* and it recurs symmetrically at the sixth *talea* (bar 22), thus becoming an important element of the form. In the *Motetus*, the figure appearing symmetrically in bars 11, 12, 13, 14 and 23, 24, 25, is important for the same reason, and also because it holds the field thematically. In the *Contratenor*, bars 3, 4, 5; 7, 8, 9; 16, 17, 18, 19, have a thematic surge; they too are perhaps related to the head motif.

In considering the *Kyrie-Christe-Kyrie* complex it is not only interesting, but necessary, to compare the original Gregorian form with that imposed upon it by Machaut. The liturgy prescribes that each of the three invocations should be said three times. Gregorian chant copes with these nine invocations in two ways:

	Type A	Type B
Kyrie eleison	... theme 1	... theme 1
Kyrie eleison	... theme 1 (repeat)	... theme 2
Kyrie eleison	... theme 1 (repeat)	... theme 1
Christe eleison	... theme 2	... theme 3
Christe eleison	... theme 2 (repeat)	... theme 4
Christe eleison	... theme 2 (repeat)	... theme 3
Kyrie eleison	... theme 3	... theme 5
Kyrie eleison	... theme 3 (repeat)	... theme 6
Kyrie eleison	... theme 4	... theme 5 + coda

In brief, Type A has one theme for the first three *Kyrie*, one for the three *Christe*, one for the fourth and fifth *Kyrie*, and a special and longer coda-theme for the final *Kyrie*. Type B uses alternating themes, and here the final *Kyrie* does not introduce new material but is a restatement with extended development of theme 5.

It is Type A which gives the key to the general formal structure of our *Kyrie-Christe-Kyrie*. As it has only one theme for the first three *Kyrie* and one for the *Christe*, Machaut, using respectively theme 1 and theme 2, writes only one polyphonic section (on theme 1) for the first three *Kyrie*, and one polyphonic section (on theme 2) for the *Christe*. But the last three *Kyrie* change matters: Machaut, faithful to his Gregorian model (Type A), first writes a polyphonic section based on theme 3 (and similar in proportion to themes 1 and 2). He then writes a final polyphonic section

based on theme 4, and again following his Gregorian model—which is in extended development—he makes it almost twice as long (29 bars against 17).

Now a clear understanding of the reasons for Machaut's plan is not purely a matter of academic interest. Returning to the Gregorian *Kyrie*, Type A, the question is: did Machaut actually want his corresponding polyphonic sections repeated in accordance with this scheme? The repeat-signs found in the manuscript suggest that he did. On the other hand, comparison with the Tournai Mass, as well as internal evidence and aesthetic considerations, incline me strongly to believe that such may very well *not* have been Machaut's intention.

The *Kyrie-Christe-Kyrie* of the Tournai Mass is built, like that of Machaut's, on the Gregorian Type A. Here too, as in the Machaut manuscripts, we find the same repeat-signs applied to the same sections. If we time the music—much less developed than Machaut's, and quite devoid of ornamentation—we find its duration, *with all the repeats*, to be 225 seconds. Turning to our Mass, we find the duration of the same complex, without repeats, to be almost identical, i.e. about 224 seconds. Since the *Kyrie-Christe-Kyrie* took a normal length of time during the celebration of the Mass, would not this comparison tend to prove non-repetition in the Machaut Mass? As to internal evidence, Machaut's *Christe* is most clearly built up of three similar sections: do they not correspond to the three-fold *Christe eleyson*? In the same way, *Kyrie II*, followed by the double-length *Kyrie III*, represents very adequately the three last *Kyrie eleyson*. Finally, from the aesthetic point of view, it would seem difficult indeed to accept the repetition of sections so rich and so complete in themselves. But how then are we to 'explain away' the repeat signs in the manuscripts? These, it might be said, are perhaps nothing but a traditional residue. It is certain—witness the Tournai Mass—that repeats were at one time obligatory. It is equally certain that in the Dufay period these repeats were no longer necessary. Could it not be said that the scribe put the repeat signs into Machaut's *Kyrie-Christe-Kyrie* either from habit, or because, theoretically, the Gregorian *Tenors* call for repetition, but that Machaut himself implicitly overruled these traditional exigencies? It is perhaps relevant to consider that, even though a polyphonic *Kyrie* might not have repeats, the ninefold invocation would none the less be complete, thanks to the numerous voice-entries heard throughout the piece.

Suggested underlaying of the text:

(B=bar, N=note. B2N1 foll.=bar 2, note 1 and following.)

	<i>Triplum</i>	<i>Motetus</i>	<i>Tenor</i>	<i>Contra</i>
Ky	B1	B1	B1	B1
ri	B2N1 foll.	B2N1 foll.	B2N1	B2
e	B3N1 foll.	B3 foll.	B3 foll.	B3N1
e		B11N2		B10
le	B12N1	B12N1 ¹ foll.		B11N1
y	B12N2	B13N2		B12N2
son	B13	B14		B13
Ky	B15	B15N1		B14
ri	B16N1 foll.	B15N2		B15N1
e	B18N1 foll.	B16N1 foll.		B15N2 foll.
e	B20N1 foll.	B23N2	B25	B22

le	B24N1 foll.	B23N1	B26N1	B23N1 foll.
y	B26N4	B26N2	B26N2	B26
son	B27	B27	B27	B27

Christe

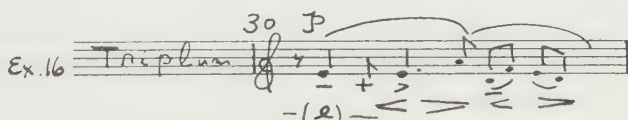
Ex. 15

Christe

Triplum	Int.---a---b---	Int. ¹ ---a---b---	Int. ² ---a---b---
Motetus	Int.---x---y---	Int. ¹ ---x---y---	Int. ² ---x---y---
Contra	A1	A2	A3
Tenor	Ia	Ib	Ic
bar	28	35	42

This subdivision is in full time, one tactus to each minim with the modern valuation: ♩ = 56-63. As already noted, the first figure (*Triplum*, bars 28-29)¹⁰ is the famous motif interwoven into the substance of the entire Mass. The isorhythmic *Tenor* and *Contratenor* are both divided into three sections or *taleae*, and Machaut builds a complete polyphonic section on each *talea*, comprising an introductory passage (bars 28-29, 36, 43), a hocket—very ‘Gothic’ with its ups and downs—between the upper voices (bars 30-31, 37-38, 44-45), and a coda developed from the same material (bars 33-34-35, 40-41-42, 47-48-49).

The intimate, contemplative character of *Kyrie I* seems to influence the *Christe eleyson*. The dialogue between the upper voices is distinctly lyrical, its touching air of supplication being inspired by the tender recollection of the Saviour’s humanity. The *points d’appui* of the melisma should be gently stressed, the singers taking care to vocalize peacefully:



The recurrent figure in the *Motetus*, bars 34-35, 41-42, 48-49, is of formal importance and should be emphasized.

The upper voices are so marked in character that it seems a good plan to ‘isolate’ them and to replace the lower voices with instruments. I have used, in the *Tenor*, a tenor viol and a tenor recorder, and in the *Contratenor*, a tenor viol, with the lute playing both parts.

The *Christe* was often conceived as a duet in fifteenth-century masses, a practice explained no doubt by the tender, individual sentiment invoked by this passage of

¹⁰ Correct the c^o in Hübsch’s edition to a’.

the Ordinary, as well as by a pre-occupation with balance in the formal structure of the *Kyrie-Christe-Kyrie* triptych.

As will be seen from the following diagram, the words *Christe eleyson* may be set once in each of the three sections.

<i>Text</i>	<i>Triplum</i>		
Chri	B28	B36N1	B43N1
ste	B29N1 foll.	B36N2 foll.	B43N2 foll.
e	B34N2-3	B41N2-3	B48N2-3
le	B34N4-5	B41N4-5	B48N4-5
y	B34N6-7	B41N6-7	B48N6-7
son	B35	B42	B49
<i>Text</i>	<i>Motetus</i>		
Chris	B28	B36N1	B43N1
te	B29N1 foll.	B36N2 foll.	B43N2 foll.
e	B34N1	B41N1	B48N1
le	B34N2	B41N3	B48N3
y	B34N3	B41N3	B48N3
son	B35N1-2	B42N1-2	B49

Kyrie II

Ex. 17

Kyrie II

Triplum	Int.-----a----	Int.'-----a----
Motetus	pass.-----x----	pass.-----x----
Contra	A1	A2
Tenor	1a	1b
bar	50	58

In full time, each modern minim receiving a tactus: ♩=63-66. The Gregorian *Tenor* is divided into two isorhythmic sections (bars 50-57, 58-66), each of them ending with an extremely decorative hocket. The setting, having gradually gained momentum from the tranquil *Kyrie I* and through the lyrical *Christe* up to this point, here begins to take on a broader, more brilliant *style de cérémonie*. The hockets are more characteristic in the quicker alternation of their short note-values, and call for an airy performance. Closing as they do each of the two sections, they clearly show how Machaut uses them to replace the extended developments of the cadential Gregorian melisma. Note the effect of amplitude which results from the ascending movement of the voices in bars 52-53. These bars (as well as 57-58), in the *Motetus*, are important formally and contrapuntally.

Suggested underlaying of the words:

<i>Text</i>	<i>Triplum</i>	
Ky	B50	B58
ri	B51N1	B59N1
e	B51N3 foll.	B59N4 foll.

e	—	B64N4
le	B56N4	B65 (ley)
y	B56N5	
son	B57	B66
<i>Motetus</i>		
Ky	B50	B59N1
ri	B51N1	B59N2
e	B51N2	B59N3 foll.
e	B56N3 foll.	B64N3 foll.
le	B57N1 foll.	B65 (ley)
y	B57N5	
son	B58	B66

*Kyrie III***Ex. 18** Kyrie III

Triplum	Int. ---a---Int'---b---	Int"---a---Int"'---b---		
Motetus	passr---x---y-----z---	passr---x---y-----z---		
Contra	A1	A2		
Tenor	Ia	Ib		
bar	67	75	81	88

In full time, same speed as *Kyrie II*. This is the longest subdivision, coming as it does from the final and extended Gregorian 'theme 4', which is cut into two *taleae* (bars 67-80 and 81-95), each of them nearly as long as the complete *Tenor* of the preceding part. The twofold cutting again throws this *Kyrie* into binary form. Each half comprises two sections: introduction, hoquet, introduction, hoquet. The thematic material is identical with that of *Kyrie II*, but, still faithful to the Gregorian model, it is extended here in the manner of a variation. In recapitulating *Kyrie II* it grows bolder and more soaring, its rhythmic figurations are intensified (bars 81, 82, 83; 89, 90, 91) in order to close the complete complex with breadth and brilliancy. In the *Motetus*, bars 67-70, 73-74, 87-88 are of course important. It is suggested that bars 93 and 94 of the *Tenor* should be corrected to:



Suggested underlaying of the words:

Text	Triplum			
Ky	B67	B74	B81N1	B88
ri	B68N1-2	B75N1-2-3	B81N2-3-4	B89N1-2-3
e	B68N3	B75N4 foll.	B81N5 foll.	B89N4 foll.
e		B79N2 foll.		B93N2 foll.
le	B72N4	B80N1	B86N4	B94N1
y	B72N5	B80N2	B86N5	B94N2
son	B73	B80N3	B87	B95

declamation (as opposed to the lyrical melismas of the foregoing division) naturally hastens the pace.

In this division we find elements of the *Conductus*¹¹ style. This is essentially syllabic and 'chordal', sparing in its use of melisma, and with no *cantus firmus* or *Tenor*. Isorhythmic conceptions play no part in it. Its form seems to be traced over a grouping of the text into four sections, each corresponding section of the music being brought to a solid end by a marked and characteristic cadential formula, underlined by the introduction of melismatic material into the otherwise homophonic texture. It is possible, however, that a second principle of form is involved, as may be discovered from the instrumental interludes. There are four of these interludes (bars 20, 47, 65, and 98). Furthermore, two passages (bars 43-46, 93-97) magnify and throw into high relief the Lord's name, *Jesu Christe*. And as both these passages are followed by an instrumental bar, they become the two pillars commanding the formal structure, as shown in the above schema.

The presence of what one cannot hesitate to call the four instrumental bars is exceedingly interesting—they are like windows through which Machaut's players look out at us. That these passages are purely instrumental cannot be doubted: they have no thematic *rapport* with the context, it is impossible to take them for vocal melismas prolonging the vocal note they follow, and they have no words. They must perforce be instrumental. If that is so, they must have a function, and in fact they have: they isolate certain sections of the text, and provide a kind of punctuation; they relieve from time to time the sameness of the vocal declamation and give physical or intellectual breathing-space to singers and listeners. The use of such instrumental interludes in the long declamatory and homophonic *Gloria* and *Credo* may have been a tradition or a more recent habit, as a corresponding feature is to be found in the *Gloria* of the Tournai Mass.

Since the *Gloria* is written in *Conductus* or 'chordal' style, we are apt to be particularly impressed by the simultaneous effect of the four parts, or, in other words, by the 'harmony'. The most characteristic sound is surely the 'doubled leading-note' chord:

Ex. 21

38

- mni-po- tens. Do-mi-ne Fi-li

- mni-po- tens. Do-mi-ne Fi-li

- mni-po- tens. Do-mi-ne Fi-li

- mni-po- tens. Do-mi-ne Fi-li

¹¹ *Conductus*, from the Latin *conducere*, to lead, to escort, i.e. music for procession.

Here, the $g\sharp'$ leads to a' (Triplum), the $c\sharp$ (Tenor) to d (Contratenor). We also have the melodic augmented second, f' to $g\sharp'$ (Triplum). Another striking feature is the freedom with which dissonance is used:

Ex. 22

mae vo. - lun.ta.tis. lan-da.
mae vo. - lun.ta.tis. lan-da
- mae vo. lun ta. tis. lan- da
- mae vo. lun.ta.tis. lan-da

The *Gloria* should be performed with a light, springing gait. There should be something elastic in the voicing of the crotchet. At the same time, this lightness and elasticity must not impair the vigorous, positive *allure* of the music.

The Gregorian intonation, with the words *Gloria in excelsis Deo*, is of course lacking, as it is chanted at the altar by the celebrant. In non-liturgical performance, it would seem desirable to have it chanted by one of the tenors. The following (from *Missa XI, Orbis factor*) will be found to go well with this *Gloria*, as they are both in the First Mode:

Ex. 23

Glo. ri. a in ex-cel-sis De-o

The instrumental bars become more of a piece with the vocal texture if the instruments enter one bar ahead of time, and finish one bar after their figure; that is to say, if they begin to play before the voices stop, and end with the note on which the singers recommence. It also seems proper that the instruments should join with the voices in performing the three last bars before the *Amen* (bars 103-104-105).¹²

This kaleidoscopic finale—the *Amen*—is certainly one of the most audacious pages ever written (to be classed, for example, with the ending of Monteverdi's five-part madrigal, *Zefiro torna*). After the five-bar introduction, the upper voices, in hocket, make countersteps with the *Tenor*, and continue to do so when the latter breaks out into its dazzling and unusually long hocket passage (bars 120-126). The insistent triumph so lyrically expressed here is indeed something unique. Care should be taken not to perform this passage in a cut-and-dried way, but to invest the implied curves with their full surge, *minimizing* rather than exaggerating the (modern) quaver rests. The repeated quavers should both, I think, be given without ceasing to sing:

¹² The instruments I used when recording the Mass were: *Tenor* part: a tenor viol, doubled by a tenor recorder; *Contra*: a tenor viol, doubled at the octave by a treble viol. Also a lute playing both parts *in loco*.

the effect is that of a true vocal tremolo (not a vibrato) i.e. repetition of notes of the same pitch without any break, an effect much prized in ancient Gregorian chant.

This extraordinary hocket in the *Tenor* has at first an instrumental look. But when its true character has been grasped, its vocal nature becomes blindingly evident, and indeed it may serve as a key to the understanding of the hocket considered as an element of vocal ornamentation.

The *Amen* falls low for the upper voices. To obviate the resulting *grisaille* and produce a clearer tone-colour, the *Triplum* and the *Motetus* may be doubled an octave higher by a discant recorder and a treble viol respectively, the *Contratenor* not being sung, but played by a viol, the *Tenor* being of course sung and doubled in unison by a lute which also plays the *Contratenor*.

As already said, I have thought that internal evidence might point to this *Amen* being first in diminished, then in full, time. The fact is that bars 106-117 flow very easily in diminished time, and moreover contain no (modern) quavers. From bar 118 to the end, on the other hand, the music is manifestly in full time. For these reasons, I personally use both times. My solution is perhaps too bold, but I would suggest that those interested put it to the test.

It would seem well in bar 115 to sharpen the third note both of *Triplum* and *Tenor*. As to the underlaying of the text, Hübsch's edition may be followed.

(To be continued)

THEORY AND PRACTICE IN TWELVE-TONE MUSIC (Stadlen Reconsidered)

George Perle

That Mr. Stadlen's attack on the twelve-tone system¹ contains errors and inconsistencies and reveals certain prejudices on his part was ably demonstrated by his distinguished critics.² Unfortunately, they neglected to point out that it also contains some valuable insights. Mr. Stadlen gives the wrong answers to the questions he asks, but this is of less importance than the fact that he asks some of the right questions. Stadlen's critics threw the baby out with the bath in disposing of some obviously untenable generalities while ignoring specific details of his argument.

One must emphatically agree with Roberto Gerhard's statement that twelve-tone music must be judged 'like any other, entirely "on the *prima facie* appearance of the correspondences and structures"' and not by 'the intellectual processes which accompany the genesis of the work'. But doesn't the professional musician have a right to ask—in reply to Mr. Gerhard's description of 'serial organization . . . as a kind of intellectual scaffolding very useful to me for the *making* of the work but not meant to attract your attention at all'—in what way is this 'intellectual scaffolding' useful? What is its relation to the 'correspondences and structures . . . *as they are made to sound*'? It was this relation that was the main subject of Mr. Stadlen's inquiry, to which his notion of 'intrinsic serial significance' referred. Mr. Gerhard reduces this notion to an absurdity when he asks, rhetorically, 'What possible "significance" could be extracted from consciously registering the file-past of the terms of a given series in the correct order?' But it is precisely this absurdity that masquerades as 'analysis' in almost all discussions of twelve-tone music by many of its most enthusiastic supporters (Mr. Gerhard's articles are among the exceptions).

What is the 'musical approach' that Mr. Gerhard insists upon? Presumably he means that what we ought to hear, and what we cannot help but hear, in a twelve-tone composition, as in any other, is not the 'serial thread' but—to borrow terms of a less problematical musical era—'melodies' and 'harmonies', i.e., various tonal

¹ *The Score*, February 1958.

² *More views on Serialism* by Walter Piston, *Apropos Mr. Stadlen* by Roberto Gerhard, *To the Editor* by Roger Sessions, in *The Score*, July 1958. Mr. Stadlen's rebuttal appears in *The Score*, November 1958.

configurations that are somehow made to belong together, that create a larger overall musical continuity. But one ought to be able to establish some valid connexion between the 'serial thread' and the musical 'correspondences and structures . . . as they are made to sound', though one may not be expected to 'detect and to follow the serial thread in audition'. The usual analytical procedure of tracing the notes of a given composition to the 'file-past of the terms of a given series in the correct order' does not establish such a connexion. The series and the composition 'based' upon it continue to occupy their separate planes and neither one justifies or explains the other, even though each note of the piece is 'consciously registered' on paper.

Roger Sessions implies that this is a normal and necessary state of affairs, since 'musical theory, which is by nature abstract, and music, by nature concrete, are incommensurable, and neither can be validated, or the reverse, by the other'. He is quite right in asserting that a given music is not 'compromised if the aesthetic or technical principles professed by its composers can be successfully assailed'. A piece of music can only be judged by its musical effect, not by any theories about it. But ultimately this purely musical judgment is a purely subjective private affair, at least at the present level of our ability to communicate verbally about it. If musical discussion and criticism are to consist of something other than more or less elaborate paraphrases of the two statements *I like it* and *I don't like it*, then one must say something about 'aesthetic or technical principles' as these are revealed by the *music* in question. (What the composers themselves may profess concerning these principles is quite another matter, which may or may not be consistent with what their *music* reveals.) Mr. Sessions is the author of an excellent textbook of traditional harmony, entitled *Harmonic Practice*. As its title suggests, it is concerned with concrete musical problems and is illustrated with concrete examples from the musical literature. I do not believe that he considers the principles discussed in his book to be 'incommensurable' with, and not to be 'validated, or the reverse', by music. I am making a plea for some comparably relevant discussions of twelve-tone practice.

Like myself, Gerhard finds no such relevance in the work of 'the analyst who patiently plots serial tracks up and down the score but remains blissfully unaware of the *compositional* "engagement" which motivated the composer's every move'. A relevant discussion of a serial composition would require an analysis of the relation between the *effective* (i.e., audible) compositional elements and the set, not a mere tabulation of the notes of the set as they occur in the composition, a tabulation that has no more meaning than the labelling of the notes of a tonal composition to indicate their scale-degrees. A necessary first step is a definition of twelve-tone serial composition, but, so far as the work of Schoenberg and his most distinguished disciples is concerned, one can make no statement more specific than the following: all the tone-relations that govern a given musical context are assumed to be referable to a pre-determined arrangement of the twelve notes of the semitonal scale, an arrangement that is understood to retain its identity regardless of its transpositional level or direction. One can make no general statement at all concerning the conditions that define the referability of the composition to the set or the extent of the musical area governed by a particular set. Within any given form of the set the notes are presented in a specified order, no note is omitted, and no note is repeated. But

what about note-repetition, omission, and ordering in the compositional employment of the set? In these respects the practices of Schoenberg, Berg, and Webern are totally dissimilar from one another.

In spite of the absence of any general precompositional assumptions regarding the compositional employment of the set, it is usually possible to abstract the latter from the composition itself. But is this enough to disprove Mr. Stadlen's contention that the set 'does not survive its use in composition'? For example, Schoenberg's distribution of the notes into what he calls a 'principal part', a 'secondary part', and 'passages (which) are to retire into the background as accompaniment', results in a multitude of non-serial linear adjacencies. Shouldn't these be aurally distinguishable in some way from the linear adjacencies given by the set itself? If they are not, is not the primacy attributed to the serial adjacencies arbitrary and irrelevant? It would seem that a meaningful and consistent relationship between the non-serial and the serial linear aspects of a twelve-tone composition would be required. Similar questions may be raised in connexion with the far more complicated problem of simultaneity in twelve-tone music. There are three possibilities: (1) if the music makes sense without such a meaningful relationship between the precompositional and compositional elements—and this sense, as Sessions points out, depends entirely on a *musical* judgment and not on any theoretical assumptions—then we must admit that the set, like Schiller's seasoned apples, is largely irrelevant, and the *practical* theorist may ignore it, just as he may ignore the symbolic numerological devices attributed to Bach; (2) if the music doesn't make sense—again a purely musical judgment—this may or may not point to inconsistencies or irrelevancies in the employment of the set and/or in the precompositional assumptions; (3) if there is a meaningful connexion between the assumed serial basis of the work and the apparently non-serial elements that one *does* 'detect and follow in audition', then this implies the existence of certain assumptions that are not stated among the given postulates of set-structure. In this last case it is the responsibility of the analyst to attempt to describe these unstated assumptions and their relation to the given postulates. Anything less than this is an irrelevant activity on his own part.

Almost any particular twelve-tone piece presents special problems. Let us look at the opening pages of Schoenberg's *Violin Concerto*. The violin part at Bars 24-31 consists of two-note segments of the set reiterated at various octave transpositions. Simultaneous octave doublings, however, are avoided, although their harmonic effect differs in no essential respect from that produced by these oblique octave adjacencies. The rule of non-omission of notes is observed, but is not this observance merely ritualistic when we are asked to account demisemiquaver harmonics at the extreme upper limit of the instrument as valid pitch-elements? In the piano reduction many notes are merely cued into the part, to be omitted because of 'practical considerations of performance'. Will the resulting incomplete sets in the piano part cause the latter to sound 'wrong' or are the missing notes implied by the context, as in piano reductions of classical scores, and if so why observe the rule of non-omission?

A 'rule' to the effect that a composition should be based on a single set is given in practically every presentation of the principles of Schoenberg's twelve-tone system

(cf. Rufer, *Composition with Twelve Notes*, 1954, pp. 106ff, and Schoenberg's own statement, quoted therein, 'It does not seem right to me to use more than one series'). Webern's works conform to this 'rule', but it is not an adequate formulation of the practice of either Schoenberg or Berg. Rufer quotes from a letter of Schoenberg dated April 8, 1950: 'Only in the *Third String Quartet*, for fear of monotony, did I use two forms of the sequence of notes in the consequent of the series, while the antecedent, the first six notes, remains unaltered.' But in the *String Trio*, Op. 45, a revised ordering of the second half of the original set is consistently employed in the section entitled '1st Episode', and in the '2nd Episode' two 'new' sets appear, permuting the order of notes in each half of the original set. Is a statement of the set that comprises 'wrong' notes, due to a copyist's error, still a representation of the same set? Here is Rufer's comment on the *Fourth Quartet*, 1st movement, Bar 228, where there appears, in the cello part, 'F on the second semiquaver instead of F sharp, which would be correct according to the series. As there seems to be no musical reason for the change, and as this deviation is not paralleled elsewhere, one might think that this was a mistake in copying. Richard Hoffman, who was closely associated with Schoenberg from 1947 to his death, both as a pupil and in a personal capacity, says on this point: 'These remarkable irregularities in the series often occur. Schoenberg never attached great importance to putting such "wrong" notes right, so long as no octave doublings resulted'. Is the avoidance of octave doubling the only important criterion of pitch propriety in the twelve-tone system?

In his early study of Berg's *Lulu*,³ Willi Reich attempted to demonstrate that the various sets employed in this work are all based upon a single basic set. His so-called analysis is mainly a description of the operations by means of which Berg ostensibly generated these auxiliary sets from the basic set. Reich's information was evidently directly communicated to him by the composer himself. It could not possibly have been derived from the only valid source, the composition, which doesn't present a shred of evidence to support his description. Nevertheless, the story that Berg based the whole of *Lulu* on a single set, thus demonstrating once more the validity of Schoenberg's principle that one should not 'use more than one series', is now a holy legend, dutifully repeated together with a complete recapitulation of Reich's 'analysis' by Leibowitz, Searle, and numerous other experts.⁴ Here is an example of how Berg is supposed to have derived one of his so-called auxiliary sets: (1) an intermediate set, not compositionally employed, is generated by the direct linear succession of every fifth note of a circular statement of the basic set; (2) two non-adjacent notes are extracted from the set thus generated; (3) the ten remaining notes are cyclically permuted; (4) the resulting ten-note series is partitioned into two five-note segments; (5) the internal ordering of each segment is revised. It is this derivation, presumably, of the two pentatonic formations and perfect fifth associated with Countess Gesch-

³ *Alban Berg's Lulu*, *The Musical Quarterly*, October 1936; *Alban Berg*, Vienna, 1937.

⁴ The only disagreement with the accepted view that I have seen is by Hans Keller, in *The Music Review*, November 1953. A similar unanimity of critical opinion concerns the last movement of Berg's *Lyric Suite*. The numerous analyses of this work do not progress beyond a bare mention of the fact that the last movement is in the twelve-tone system, since any further analytical activity would entail an admission that this movement is based on two distinct sets.

witz that integrates her music into the material of the opera as a whole. Of its integration there can be no doubt, but in this particular instance 'the effect of serial activity exists merely in the composer's imagination'.⁵

The inadequacy of Berg's, and other composers', descriptions of their serial procedures, however, is no proof of Mr. Stadlen's contention that the 'successful serial works . . . might well be what they are without their serial history'. Stadlen challenges a familiar twelve-tone concept: 'Chords cannot be derived from a series by sounding some of its notes simultaneously instead of successively, since this abolishes the order of the notes and thus destroys the identity of the series. What survives is merely the stock of notes and whatever harmonic implication they may suggest. Simultaneity is not just another aspect of sequence, but its obliteration.'

Two postulates of the generally accepted *verbal* description of the twelve-tone system—(1) that the basis of a twelve-tone work is a specific permutation of the twelve notes of the semitonal scale; (2) that any segment of this twelve-tone set may be stated as a chord—are here claimed to be inconsistent with each other. Mr. Stadlen is undoubtedly correct when he points out that the order of notes that are simultaneously sounded cannot be defined. But he is not correct in assuming that the identity of a set necessarily resides exclusively in the order of its notes, regardless of what the twelve-tone manuals may have to say on the subject. The properties that *actually* identify a given twelve-tone set and whether or not these are consistent with the harmonic exploitation of the set cannot be determined apart from a concrete musical situation, in the understanding of which audition plays the ultimate deciding rôle. A contradiction between Schoenberg's statement, 'It does not seem right to me to use more than one series', and his actual practice in the *Trio* has been pointed out above. But a study of the score shows that the identity of the set resides in the pitch content of each half of the set (to be more exact, in the total intervallic content of the segment, since the *absolute* pitch content is revised when the set is transposed), the actual *order* of the notes within each half of the set being a secondary and variable feature. Far from destroying the identity of the series, it is in terms of these two six-note chords, which are the harmonic foundation of the composition, that the

⁵ A composer's own explanation of his compositional techniques is always of interest, but the objective evidence of the work itself has precedence at all times, and when the discrepancy between the two is as great as it is in this instance the composer's explanation may be of psychological interest but is musically irrelevant. What, however, are we to say when the myth agreed upon is merely the result of a superficial error on the part of the original commentator—an error, perpetuated for almost forty years now by his successors, which the most casual reference to the score will expose? In his early book on Schoenberg (*Arnold Schönberg*, Leipzig, 1921; London, 1925), Egon Wellesz describes No. 18 of *Pierrot Lunaire* (*Mondfleck*) as a three-part fugue in the piano accompanied throughout by an independent canon between violin and cello and another independent canon between piccolo and clarinet. The score shows no canon between piccolo and clarinet, but instead a canon in diminution between the clarinet and one of the fugal voices and another canon in diminution between the piccolo and a second fugal voice. (In the first two bars the clarinet and piccolo parts together do bear some resemblance to a canon, since they present a portion of a fugal exposition.) This non-existent canon between piccolo and clarinet has since been rediscovered by René Leibowitz (*Schoenberg et son école*, 1947), Humphrey Searle (*Twentieth Century Counterpoint*, 1954), Marian Bauer (*Twentieth Century Music*, 1933), Norman Demuth (*Musical Trends in the Twentieth Century*, 1952), William Fleming and Abraham Veinus (*Understanding Music*, 1958), and, most recently, the anonymous author of the notes accompanying a new recording of *Pierrot Lunaire* under the MGM label. For a correct analysis see Paul Stefan, *Arnold Schönberg*, 1924, or, even better, see *Pierrot Lunaire*.

set must be defined, and once the set is so defined we realize that Schoenberg was correct after all in maintaining that he does not 'use more than one series'. In Schoenberg's *Klavierstücke*, Op. 33a, the set is initially stated in the form of three four-note chords. That it is not immediately possible to determine which of 13,824 sets is represented is a matter of indifference, since this series of chords is itself a primary structural element of the work as a whole. The subsequent linear unfolding of the set emphasizes the basic harmonic pattern by dynamic and rhythmic means. Does the fact that the initial harmonies might have been horizontally unfolded in 13,823 ways other than the one that actually appears mean that the composer's serial activity is irrelevant? There are certainly plenty of instances where serial irrelevance in twelve-tone composition results from the absence of any consistent relationship between the vertical and horizontal aspects of the work. But since the 'correspondences and structures' of Op. 33a 'as they are made to sound' do establish such a relationship it could never be what it is 'without its serial history'.

A more difficult problem is presented by Mr. Stadlen's other main criticism of harmonic practice in twelve-tone music: 'The attempt to create a new link between the horizontal and vertical is not only abortive but abandons half-way the idea of a new unity of the musical material which gave rise to its conception; because it applies only to some chords and not to others at the discretion of the composer. Chords formed "inadvertently" by simultaneously sounding lines are usually disregarded.' Far from disregarding simultaneities that are not derived from the set by vertically arranging its original adjacencies, Schoenberg concerned himself profoundly with this problem and by 1933 had evolved a consistent principle for the contrapuntal association of different forms of the set which he thereafter employed in every one of his twelve-tone compositions. Since this principle is described in a number of articles we will not discuss it here.⁶ This question, like the preceding one, and like the remaining points summarized in Mr. Stadlen's final argument, cannot be profitably discussed in the abstract. In a 'successful serial composition' the chords, however they may be derived, are never 'disregarded'. The relevance of the composer's serial activity to his composition is determined by the evidence of the work itself and *not* by the consistency and internal logic of his or anyone else's verbal formulations about the nature of this activity.

However, there are not a great many 'successful serial compositions', and even Schoenberg—Leibowitz and Rufer to the contrary—has written some unsuccessful ones. And among the vast army of twelve-toners today there are many who are not only unaware of the answers to Mr. Stadlen's questions, they are not even aware of the questions. The lack of any consideration of the relation between the set and the effective (audible) features of the music 'based' upon it is more deplorable in its influence on composition than on theory. The least significant compositional element in a good deal of contemporary dodecaphony has come to be the only one that is

⁶ Milton Babbitt, *Some Aspects of Twelve-Tone Composition*, *The Score*, June 1955; George Perle, *The Harmonic Problem in Twelve-Tone Music*, *The Music Review*, November 1954; Roberto Gerhard, *Tonality in Twelve-Tone Music*, *The Score*, May 1952. See also reviews by Babbitt in *Journal of the American Musicological Society*, Spring 1950 and Autumn 1950, and by Perle, in the same periodical, Spring 1957.

rigorously determined by the system—pitch. The significant elements are texture, spacing, rhythm, colour, everything but pitch. The last is *effectively* significant in a negative sense only: the contemporary idiom requires a fairly constant circulation of the notes of the semitonal scale and a fairly constant dissonant continuity. This much the set, any set, can guarantee. In an idiom where the specific pitches don't matter, nothing is more difficult than the selection of pitches. Once a set is decided upon, this troublesome problem is automatically solved. Does it matter whether the 'serial tracks up and down the score' are plotted in their original serial order from 1 to 12, or, as some of the more 'advanced' serialists require, in various complicated rotations and permutations?

WEBERN SYMPOSIUM

Peter Stadlen

The Webern issue of *Die Reihe*, edited by H. Eimert and K. Stockhausen and published by Universal Edition, is the second of a number of volumes dealing with serialism and serialist composers. The first part is documentary and skilfully manages within a short space to throw a light on the man Webern. How uneventful was his life we see from a biographical table prepared by F. Wildgans, while excerpts from letters show that here once again we have allowed a great man to struggle along just above starvation level. ('What a joy it would be to have a slightly easier existence . . . I know, of course, that regarded purely commercially my work has very little importance . . . poems do not bring in much money, but they still have to be written.') These letters also speak of his unbounded admiration for his master ('Schoenberg actually teaches creation') and his selfless friendship for Alban Berg. They reveal that purity of spirit which moved all of us who knew Webern: 'There are few things as marvellous as Christmas . . . the night on which a great man was born is still celebrated by all men . . . that is wonderful . . . should not Beethoven's birthday be celebrated in the same way?'

Of the second, analytical part, by far the most original and valuable contribution is Henry Pousseur's article: *Webern's organic chromaticism*. Pousseur starts off with the shrewd observation that there is more similarity between an early and a late work of Webern's than between any one of Webern's works and its contemporary among Schoenberg's output. This shows, he argues, that Webern's personal style, which so distinctly affects our sensibility, cannot be due to his adoption, in mid-career, of serial technique. What other aspects of Webern's music, asks Pousseur, can be found to account for it? The answer lies in what he calls Webern's purification of chromaticism, which purged his music of the last remnants of post-Wagnerian harmony.

It was not enough, says Pousseur, to proclaim the abolition of the tonic (as Schoenberg did) and to proceed from there without further ado to an arbitrary organization of the twelve notes; it was not enough simply to ignore tonality—the new order must be guarded, actively and continually, against the diatonic tendencies inherent in such intervals as thirds, fifths and sixths, in which one of the two notes will always tend to be experienced as a function of the other. Pousseur shows convincingly and in considerable detail how Webern manages to de-polarize the consonant intervals occurring in his music, how he arranges his notes in such a way that

they are felt to form truly chromatic chains of minor seconds and major sevenths, whose power of dissonance will at every point override any possible consonant allusion.

He demonstrates how Webern produces this idiom of chromatic chain reaction through the help of rhythmic accentuation which establishes links between non-neighbours—height of serial heresy!—and results in a new overall pulsation of those characteristic points of chromatic connexion. To achieve this 'subterranean rhythm of the musical development' Webern had to create a situation where it is once again possible to distinguish between the pitch of a note and its 'chromatic value'. With this *Pousseur* explicitly rejects the 'futile insistence of dodecaphonic theory on an integral and constant unfolding of the chromatic total'. This discerning analysis of sounding reality contributes substantially towards a description of what Webern's music is like.

The price Webern had to pay in serial terms for thus formulating his idiom is the dangerous proximity of certain identical chromata, which even in his late dodecaphonic works 'are brought much nearer each other than would be permitted by a strict twelve-tone procedure'. However, since this is the result of 'the superimposition of independent serial layers' we see that the cost is after all not prohibitive, since it is one of the basic contradictions and weaknesses of serial doctrine never to have excluded such parochialism.

While *Pousseur* starts from an auditive experience and tries to trace its cause in theoretical aspects of the score, Karl Heinz Stockhausen works the other way round in his essay: *Structure and experiential time*. Like the remaining articles in this issue, it belongs to that formidable brand of post-Webernite criticism that regards Webern's dodecaphonic schemes as the visible parts of the iceberg and seeks to prove the existence of further, meta-serial patterns in his music—counting, as it were, the 'ands' and 'buts' in Holy Scripture.

It has been noted before that one way of slowing down the racing hands of the clock is to watch their progress. Yet time seems to fly when our attention is otherwise engaged. Our experience of time is subjective and at variance with its objective length. Applying this general truth to music, Stockhausen suggests that here, too, we must distinguish between objective and 'experiential' time. More specifically, he claims to know what it is that determines its pace; if, as he says, we forget about time when we listen to Webern, this is due to the constant element of surprise in his music.

Such simplification gives us pause: while undoubtedly surprise may rouse our interest, a captivating melody will usually score on other points; though we despise the obvious turn, we do demand a measure of logic in a phrase. Anyhow, right at the start Stockhausen meets with difficulty in establishing what is and what is not surprising. He claims that in his example from Webern's *String Quartet*—no doubt carefully selected—the sequence of 35 crotchet chords which go to make it up induces in us a feeling of surprise through the very absence of rhythmic change—because, he says, the high incidence of such change in the preceding movement has led us to expect variety to continue. Yet Stockhausen would have found it difficult to deny

the passage under review a quality of surprise had it actually consisted of irregular and unpredictable events.

However, he goes on to demonstrate how, as our alleged surprise at finding no rhythmical change in these crotchet chords begins to wear off, the gradual introduction of *pizzicatos* among the *legato*-playing strings and of 4-tone chords in a passage predominantly made up of 3-tone chords wards off incipient boredom. But more than that: as he investigates the entertainment value of 'modes of attack' (*legato-pizzicato*) or of 'vertical density' (the number of notes in each chord), he considers each of these aspects as an independent whole. Similarly, he scrutinizes experiential time with regard to further 'parameters' such as *tempo* indications, intensities (the sequence of *pianissimos*, *fortes*, *sforzatos* and so on), compass (the distance between the highest and lowest note sounding at any moment) and register (the distribution of the notes over the various octave divisions of the continuum). The point of this analysis is to show how Webern (or some unconscious agency inside him) arranged for the element of surprise to cause experiential time to move faster in one parameter if predictability had temporarily slowed it down in another.

By now we begin to suspect that we might dispense with the term 'experiential time', since it does not seem to denote more than the degree to which a composition continues to hold our attention. But our real difficulty lies in accepting Stockhausen's description of the interaction between his parameters. For this presupposes that we experience such secondary aspects of composition as *crescendo* or *accelerando* or *pizzicato* not merely as accentuations whose meaning is confined to the spot where they occur and to the musical event they modify, but that we are able to perceive them in their own right as a meaningful continuum throughout a composition, in the same way as we are aware of rhythmic, harmonic and melodic shapes.

This refusal to observe the familiar distinction between a face and its make-up is one of the roots of the most significant and radical trends in contemporary composition. It is therefore important to note that Stockhausen leaves no room for doubt that these parameters are meant to be *heard*, since in his essay he discusses them exclusively in terms of listening experience. It might be tempting to test their audibility further in the sphere of conventional music. Since these additional aspects of a composition are being abstracted from a given score in any wanted number regardless of the composer's conscious volition, there is no earthly reason why they should not be noticeable in Beethoven if they can be felt in Webern.

As for experiential time, the introduction of this new term did not—as one might have expected—reveal an additional, hitherto unobserved strand in Webern's method of conveying musical thought. As we saw, Stockhausen merely demonstrated how the fluctuations in the various strata of experiential time cancel each other out so that its overall pace, i.e. the level of our involvement, remains constant throughout a Webern piece.

If we deny Stockhausen's premiss of his parameters' role in the formation of experiential time we obviously cannot accept his findings of constancy. But this may

well mean that we regard Webern as an even better composer than Stockhausen makes him out to be. Perhaps it is not in the nature of music—or of good things generally—to keep our interest on an even keel; it may, indeed, be a legitimate and dramatic device of composition to engage our attention to an ever varying degree.

A word must be added about the translation. The biographical part is most capably done by Eric Smith, while the translation of the analytical articles by Leo Black is both fluent and faulty. Of a number of mistakes, one must be cleared up, to prevent the formation of a legend. In the English translation a quotation from Leibowitz's book, *Schoenberg et son école*, reads: 'Webern said, with a certain exaggeration, of his *Symphony* op. 21 that there was hardly a page of it which could not also have been written by his teacher'; while in the German original Leibowitz is correctly quoted as expressing *his own opinion* 'that it might be said, with a certain exaggeration, that *prior* to his *Symphony* Webern hardly wrote a page that might not also have been written by his teacher'.

CONTRIBUTORS TO THIS ISSUE

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The music examples from Henze's *Piano Variations*, *Apollo et Hyacinthus* and *Sonata per Archi* are reproduced by permission of Schott & Co. Ltd.

